CITY OF HANFORD

GENERAL PLAN UPDATE 2002

FINAL ENVIRONMENTAL IMPACT REPORT

PREPARED FOR THE CITY OF HANFORD

BY VALLEY PLANNING CONSULTANTS, INC.

ADOPTED BY THE HANFORD CITY COUNCIL

JUNE 18, 2002

JCAO Lenses, Inc.
Hackensack, New Jersey
U.S.A.
www.jcaolenses.com

NOTICE OF DETERMINATION

FROM: XX City of Hanford
317 N. Douty Street
Hanford, CA 93230

TO: XX Office of Planning Research
1400 Tenth Street, Room 121
Sacramento, CA 95814

XX County Clerk
County of Kings
Kings County Government Center
Hanford, CA 93230

Subject: Filing Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

The City of Hanford 2002 General Plan Update, General Plan Amendment No. 2002-01
Project Title

2002021036	Jim Beath	(559) 585-2593
State Clearinghouse Number (If submitted to Clearinghouse)	Contact Person	(Area Code/Telephone Extension)

City of Hanford, County of Kings
Property Location (Include County)

The City of Hanford 2002 General Plan Update
Project Description

This is to advise that the Hanford City Council has approved the above described project on June 18, 2002, and has made the following determinations regarding the above described project:

1. The project [(X) will ( ) will not] have a significant effect on the environment.
2. (X) An Environmental Impact Report was prepared for this project pursuant to the provision of CEQA.
   ( ) A Negative Declaration was prepared for this project pursuant to the provision of CEQA.
3. Mitigation Measures [(X) were ( ) were not] made a condition of approval of this project. (See attached City Council Resolution No. 02-39-R.)
4. A statement of Overriding Considerations [(X) was ( ) was not] adopted for this project. (See attached City Council Resolution No. 02-39-R.)

This is to certify that the Environmental Impact Report with comments and responses and record of project approval are available to the General Public at: City of Hanford, Community Development Department, 317 N. Douty Street; Hanford, CA 93230.

Jim Beath	June 19, 2002	Community Development Director
Signature (Public Agency)	Date	Title

Date received for filing at OPR:

WHEREAS, the City of Hanford City Council makes the following findings regarding the EIR:

Finding

1. Completion of the Draft and Final EIR was in compliance with CEQA:

Evidence

a. The Draft EIR was prepared after Notice of Preparation was given on January 25, 2002.
b. The Draft EIR was prepared as part of the General Plan Update pursuant to CEQA Guidelines Section 15168 and published as Volume I of the Draft General Plan.
c. The Draft General Plan Update, including the Draft EIR was circulated for public review and comment between the dates of April 5, 2002 and May 28, 2002.
d. The Final EIR includes the Draft EIR; and the comments received during the public comment period and the responses to the comments, both of which are attached to the staff report provided to the Commission.

Finding

2. The Draft and Final EIR were considered by the City Council prior to approval of a resolution adopting the General Plan Update.

Evidence:

a. Each Council Member received for review a copy of the Draft EIR in April 2002, and a copy of the proposed Final EIR on or before June 18, 2002.
b. The City Council reviewed the proposed Draft and Final EIR in conjunction with the presentation of the staff report on June 18, 2002 during the public hearing, and prior to taking any action on the "2002 City of Hanford General Plan Update".

Finding

1. The City Council considers the Final EIR a reflection of the City's independent judgement and analysis of the proposed General Plan Update.

Evidence:

a. Each Council Member received a copy of the Draft EIR in April 2002 and was invited to comment on the document. None of the council members provided comments to the Draft EIR.
b. Each Council Member received a copy of the Final EIR prior to the June 18, 2002 meeting and had the opportunity to review the Final EIR and add additional comments or questions prior to making a decision.
c. The City Council conducted a public hearing to take testimony and receive evidence regarding the Draft and Final EIR prior to taking action regarding the Final EIR. Comments or questions posed by the public in attendance at the public hearing were addressed prior to closing the public hearing.

Finding

4. The General Plan Objectives, Policies, and Programs constitute a Mitigation Monitoring Program. The reporting program is accomplished by the annual report to the City Council on the implementation and progress of the General Plan. No additional Mitigation Monitoring and Reporting Program is necessary.

Evidence:

The General Plan is a set of Goals, Objectives, Policies and Programs which govern the physical development of the City, and require that certain criteria must be met before development may occur. Many of the Policies and Programs contained in the General Plan are mitigation measures which are designed to eliminate significant adverse effects on the environment and on the people who live and work in the City of Hanford. These Policies and Programs are also designed to coordinate the expenditure of public funds to facilitate the physical development of the City. Therefore, projects proposed by the City, other public agencies, and individuals that require City approval must be consistent with the General Plan. The City is required by Government Code Section 65400(b) to prepare an annual status report to the City Council on the status of the General Plan and progress in its implementation. These two requirements taken together constitute a Mitigation Monitoring and Report Program as required by Public Resources Code Section 21081.6.

Finding

5. The administrative record documenting the consideration of the Draft and Final EIR is kept in the office of the Hanford Community Development Department located at 317 N. Douty Street, Hanford, California.

Evidence:

The City of Hanford has created the Community Development Department to undertake the planning activities for the City of Hanford. The Department is staffed by City employees charged with maintaining records of the City of Hanford planning and community development activities. The current address of the Community Development Department is 317 North Douty Street, Hanford, California.

WHEREAS, In accordance with the provisions of the Final EIR, the City of Hanford City Council finds that there are two significant effects to the environment that cannot be mitigated to a less than significant levels if the General Plan Update is adopted by the City Council:

I. **Significant Unavoidable Impact After Mitigation (Air Quality)**

The project will result in regional air quality impacts that cannot be mitigated to less than significant. Growth in population and employment will increase the emission burden of the area and feasible offsets are minimal at this time. However, the actions identified in the EIR for local government action would substantially reduce mobile source and stationary emissions associated with implementation of the General Plan.

Finding:

6. The General Plan provides for a range of housing types and neighborhood development scenarios with the purpose of promoting efficient urban development access to alternative transportation facilities including public transit as a means of reducing dependency on the automobile and sharing in efforts to reduce air pollution. These policies and programs reduce the impact of air pollution, however they do not reduce those impacts below a level of significance. The City of Hanford lacks the authority to reduce motor vehicle pollution. That authority lies with the Federal and State governments. Therefore, the General Plan Policies and Programs cannot be totally effective in reducing air pollution associated with the implementation of the General Plan to a less than significant level.

Evidence:

The General Plan Elements all contain Policies and Programs aimed at taking local measures to reduce air pollution. These policies and programs are denoted with an (AQ) following their identification. The range of these policies is from creating compact development and nearby neighborhood commercial centers, to improving transportation systems and making alternative transportation more available. While the City may have an impact on urban designs that promote the use of bicycles, pedestrian, and public transit, local policies have little impact on the major causes of air pollution whose conditions are controlled by the State and Federal Government. Motor vehicles are among the leading causes of air pollution in the Valley. The Valley's geographic location in comparison to other regions also adds to increased air pollution. Exemptions for certain kinds of agricultural activities also adds to diminished air quality. The California Air Resources Board and the San Joaquin Valley Air Pollution Control District has the authority to promulgate regulations that affect Hanford and all other cities in California that may lead to major improvements in air quality. The City of Hanford does not have authority to make substantial reductions in air pollution affecting the City. The City of Hanford and Kings County have made substantial progress in increasing ridership of the KART system between 1994 and 2001. According to the Transportation and Circulation Chapter of the Final EIR, annual ridership is estimated at 836,000 and regional routes transport about 17,000 riders per month. Expanding fixed routes in the City is expected to carry close to 50,000 riders per month in the City. State and Federal programs to discourage reliance on the automobile may increase overall ridership demand of public transportation. The Final EIR contains information generated by the Kings County Council of Governments that shows that anticipated air pollution generated by the construction of future roadways to accommodate the 2025 population of the City will be in conformity with the emissions budget scenarios established for Kings County. However, the San Joaquin Valley Air Pollution Control District is considering a change in designation from "severe" to "extreme" which would delay attaining Federal standards until the year 2010.

Finding:

7. Growth and development of the City of Hanford will generate incremental new mobile sources of air pollution such as motor vehicle trips, as well as fixed sources such a new households and commercial and industrial establishments. Hanford's rate of growth is anticipated by State agencies and is considered in their planning efforts. The social and

economic consequences to Hanford in failing to adequately plan and implement programs to accommodate such growth would be devastating to the community.

Evidence:

The State of California Housing and Community Development Department estimates that a minimum of 200,000 new housing units per year needs to be constructed to ensure adequate housing in the State. All cities in the state are expected to accept a fair share of the housing production burden. If Hanford did not plan to accommodate the growth projected for the City, the growth would be focused on other communities in Kings County or in adjacent Counties. Additional pressure may be placed on the unincorporated territory of Kings County to accommodate new large lot development. Such large lot development would not be efficient and lead to more reliance on motor vehicles and convert agricultural land to non-producing uses. Other cities would be faced with accepting a larger share of urban growth to replace the capacity that Hanford did not accept. The City would not achieve its goals of diversifying the economy and expanding the job market to realize a 1:1 job to housing ratio. Resources to provide public services would become stagnant and lower levels of service would be delivered to the residents of the community. The Alternatives Section of the Final EIR qualitatively evaluates the impacts of not amending the General Plan and a smaller Planning Area. Neither alternative will have a substantial impact on reducing the impacts to air quality to a less than significant level. The General Plan proposes to provide open space and recreation facilities for existing and future residents to the community. Constraining City growth would not allow the City to provide additional recreational amenities. Restrictions on the amount of land available for urban growth would increase the cost of land for housing. This increase in housing costs may place lower and moderate-income families at a disadvantage in finding affordable housing within the City. The demands for affordable housing would have the potential to place a greater burden on social service organizations to subsidize housing and diminish resources for other assistance programs.

II. Significant Unavoidable Impact After Mitigation (Agricultural Land)

A total of 3,260 acres of Prime Agriculture land and 3,291 acres of Statewide Importance land within the Planning Area would be converted to non-agriculture land use resulting in an impact that cannot be mitigated to less than significant. Approximately 3,545 acres of land within the Planning Area are in Williamson Act contracts and are eventually expected to be converted to non-agriculture land uses resulting in a significant impact. The General Plan proposes policies and programs, which help alleviate impacts associated with conversion of agriculture land. Although implementation of General Plan Objectives, Policies and programs help mitigate impacts, the effect of the loss of agricultural land is considered a cumulatively significant unavoidable impact.

Finding:

8. The City of Hanford is expected to increase in population from 44,111 in 2001 to more than 82,000 by the year 2025. The Ultimate build-out (approximately 2035) of the General Plan Planning Area will require the development of more than 6,550 acres of land surrounding the existing City. The City must expand the existing City Limits within the General Plan Planning Area to accommodate this growth. The General Plan contains Policies and Programs that

accommodate growth while reducing the impacts to air quality and the premature loss of agricultural land.

Evidence:

The General Plan contains growth estimates supported by the State Department of Finance, Kings County, and various State agencies. Hanford's historical growth rate as documented in the General Plan Land Use Element and expanded information in the Population/Housing/Employment Chapter of the Final EIR provides additional evidence supporting the presumption of continued growth in the Community. The carrying capacity of the land for residential, commercial, industrial, and public facilities found in the General Plan Land Use Element and in the Land Use Chapter of the Final EIR estimates the amount of land needed to accommodate the future population at densities and in locations acceptable to the City. The land needed to accommodate growth does not exceed the land available within the Planning Area boundaries established by the 1994 General Plan as defined in the General Plan Land Use Element and documented in the Land Use Chapter of the Final EIR. The General Plan contains Policies and Programs that promote compact development, provides for alternative transportation modes, and minimizes the land use conflicts with the rural agricultural areas. These Policies are considered mitigation measures to reduce adverse impacts caused by growth in the City.

Finding:

9. The City of Hanford is surrounded by agricultural land, much of which is considered prime farmland. Any growth in the City will consume farmland. The General Plan contains policies to avoid the premature consumption of agricultural land and the City has adopted "right to farm" legislation that will minimize the impacts to agricultural land. Impacts to agricultural land cannot be avoided in the implementation of the existing General Plan or in the General Plan Update. General Plan Policies and Programs reduce the impacts to agricultural land, but not to a level of insignificance.

Evidence:

The Final EIR analyzes the amount and location of prime farmland and other classifications of farmland surrounding the City in the Agricultural Resource Chapter and the Land Use Chapter of the document. Development patterns land consumption criteria are contained in the General Plan Land Use Element and in the Land Use Chapter of the Final EIR. This documentation of future City growth assumes densities at compact urban development standards, the need for supporting commercial and industrial areas, and public infrastructure such as parks, schools and open space. General Plan Land Use and Conservation and Open Space Policies and Programs limit premature development of agricultural land. Policies also address the urban/rural interface where continued agricultural production will take place and the desire to maintain agriculture within the Planning Area until the land is needed for urban expansion. General Plan Policies and Programs limit the size of potentially growth inducing infrastructure including water and sewer lines as those facilities approach the Planning Area Boundary. These policies discourage growth beyond the Planning Area Boundaries where agricultural uses should remain.

Finding:

10. Agriculture is a major industry in Kings County. The City desires to promote a diversification of its economy that also includes agriculture. Land values and the value of agricultural production were considered in the analysis between urban land and agricultural land. Conversion to urban land not only provides for the diversification of the City's economy in producing nonagricultural related jobs, but also generates substantial tax revenues necessary for local government to provide continuing public services.

Evidence:

The Final EIR chapter on Agricultural Resources evaluated the impacts of the consumption of agricultural land for urban purposes. The amount of agricultural land consumed by the ultimate build-out of the general Plan represents 1.2% increase in the amount of farmland converted to urban uses. While State guidelines declares any loss of farmland to be a significant impact the small increase in the amount of land dedicate to urban use in Kings County is very low compared to the almost 891,000 acres of farmland currently mapped in the County. Using standard formulas, the loss of agricultural income may be as high as $16 - $20 million annually. That loss is contrasted with the potential economic gain of urban land at $73 million annually from the same acreage. New population and the needs to diversify the City's economy are well served by the planned conversion of agricultural land. The Population/Housing/Employment Chapter of the Final EIR points out that the General Plan is based on achieving a jobs-housing ratio of 1 job for each new housing unit on the average. There is sufficient land in the General Plan to accomplish this objective especially if the number and kinds of jobs are diversified from the agricultural economy. Such diversification can not occur unless the City's growth consumes agricultural land within its Planning Boundary. The Final EIR estimates that as many as 37,600 new jobs would be created on land that is now considered agriculture. The expectation that with new job potential that will attract employment for highly trained workers, and diversity of employment opportunities the high unemployment rate of about 13% annually can be substantially reduced.

WHEREAS, the City Council recognizes that implementation of the General Plan Update will have an adverse environmental effect on air quality and agricultural resources that cannot be reduced to less than significant and that the General Plan Update contains Objectives, Policies, and Programs that are considered mitigation measures to avoid or substantially lessen those significant environmental effects. CEQA requires the decision making body to adopt a "statement of overriding considerations" to balance, as applicable, the economic, legal, social, technological, or other benefits of the General Plan Update against its unavoidable environmental risks. The above findings document the information in the public record supporting the adoption of a statement of overriding considerations by the City Council prior to adopting the General Plan Update.

NOW THEREFORE, BE IT RESOLVED that the City of Hanford City Council does hereby certify that the Final Environmental Impact Report for the 2002 City of Hanford General Plan Update has been completed in compliance with CEQA, and that said Final EIR was presented, reviewed, and considered prior to approving the General Plan Update and the Final EIR reflects the City's independent judgement and analysis.

NOW THEREFORE, BE IT FURTHER RESOLVED, that the City of Hanford City Council hereby adopts a statement of overriding considerations in accordance with the following:

"Statement of Overriding Considerations"

The economic, legal, social and other benefits of adopting the 2002 City of Hanford General Plan Update outweigh the unavoidable adverse environmental effects and those adverse effects may be considered acceptable.

Evidence:

The General Plan Update is a set of Policies and Programs intended to avoid or lessen significant impacts to air quality, however the City lacks the authority to substantially lessen impacts from motor vehicles that is responsible for 60% of the pollutants in the San Joaquin Valley. The City's General Plan Update promotes alternative transportation that will eventually lessen dependency on automobiles in the City. The City is expected to increase in population by the State of California and provide a full range of housing, including affordable housing, for that increased population. The City's General Plan Update provides sufficient suitable land for these future housing needs and also provides land for commercial, industrial land uses to balance the housing growth with new and diversified job opportunities to reduce the high unemployment rate experienced in Kings County. The conversion of agricultural land will provide increased tax revenues to the City to deliver necessary public services and not reduce the level of service to existing residents. Agricultural lands surround the City and any growth will consume agricultural land. If growth is not focused on urban areas, then pressure will be placed on the development of rural land ultimately consuming more agricultural land than managed urban development.

RESOLVED FURTHER THAT, that the City of Hanford City Council adopts the "2002 City of Hanford General Plan Update" subject to the following modifications and additions:

1. Policy LU 8.7. The conversion of existing residential uses to office uses or the construction or development of office uses on vacant land within the OR district shall require the issuance of a conditional use permit by the City. The application for such permit shall contain sufficient information to allow the evaluation of the proposed project consistency with the policies and programs of the Historic Office Residential area and other select OR locations.

   Program LU 8.7-A. Any conditional use permit issued for an office use on a vacant lot or a lot that already contains a structure shall require the design of the new structure be of a residential architectural style compatible with the surrounding neighborhood.

2. That Policy L.U.9.3 on Page LU-28 and Policy L.U.10.2 on Page LU-29 of the Draft General Plan, modify the statement that "merchant banks" are included in the Planned Commercial designation to read "merchant banks" are <u>not</u> included in the Planned Commercial designation.

3. The additional minor land use changes recommended by City staff as provided in the staff report to the Planning Commission dated June 11, 2002 are included as a part of the General Plan's land use map.

4. The designation of "Office Residential" (OR) for the one lot located at the northeast corner of Mulberry Drive and Grangeville Boulevard are included as a part of the General Plan's land use map.

PASSED AND ADOPTED at a regular meeting of the City Council of the City of Hanford held on the 18th day of June 2002, by the following vote:

AYES:	Council Member	GALLEGOS
		SANCHEZ
		CHIN
NOES:	Council Member	NONE
ABSTAIN:	Council Member	NONE
ABSENT:	Council Member	AYERS
		BUFORD

APPROVED

Dan Chin
VICE MAYOR

Attest: Karen McAlister
City Clerk

STATE OF CALIFORNIA)
COUNTY OF KINGS)ss
CITY OF HANFORD)

I, **KAREN McALISTER,** City Clerk of the City of Hanford do hereby certify the foregoing Resolution was duly passed and adopted by the City Council of the City of Hanford at a regular meeting thereof held on the 18th day of June, 2002

Dated: June 19, 2002

Karen McAlister
City Clerk

City of Hanford
Environmental Document Transmittal Letter

Date: June 7, 2002

To: (See Attached List)

From: Lead Agency
City of Hanford
Community Development Department
317 N. Douty Street
Hanford, CA 93230

Subject: Review of the Final Environmental Impact Report for the City of Hanford General Plan Update 2002 Project.

Enclosed is a copy of the environmental document that is being transmitted to each Local, State or Federal agency that commented on the Draft EIR for this project. Any agency not identified on the attached list may obtain a copy of the above named environmental document by contacting the above noted Lead Agency at (559) 585-2583.

The Final EIR is being transmitted to all agencies that submitted comments during the public review and comment period of the Draft EIR. A ten-day review period is hereby being given in accordance with CEQA Guidelines Section 15090, as well as, Public Resources Code Section 21092.5. The ten (10) day review period of the Final EIR shall commence on June 6, 2002 and terminate on June 17, 2002.

Any written comments regarding the above named environmental document must be received at the Lead Agency address no later than 5:00 p.m., June 17, 2000. Facsimiles will not be accepted. If no comments are received by the date indicated, it will be assumed that the document is acceptable. Further information may be obtained by contacting Jim Beath, Planning Director at (559) 585-2583.

The City Council of the City of Hanford will consider the certification of the Final EIR and the adoption of Findings and a Statement of Overriding Considerations a regular meeting to be held at 7:30 p.m. on June 18, 2002 at the City Council Chambers of the Civic Auditorium, 400 N. Douty Street, Hanford, California.

Jim Beath TBS

Jim Beath, Planning Director for the City of Hanford

RESOLUTION NO. 02-39-R
(GENERAL PLAN AMENDMENT NO. 2002-01)

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF HANFORD CERTIYING THE FINAL ENVIRONMENT IMPACT REPORT, ADOPTING A STATEMENT OF OVERRIDING CONSIDERATIONS AND ADOPTING THE 2002 HANFORD GENERAL PLAN UPDATE

At a regular meeting of the City Council of the City of Hanford duly called and held on June 18, 2002, on motion of Council Member **GALLEGOS**, seconded by Council Member **SANCHEZ**, and duly carried, the following resolution was adopted:

WHEREAS, the California Government Code, Section 65300, requires that the planning agency of each city shall prepare, and the legislative body shall adopt, a comprehensive long-term general plan for the physical development of the city; and

WHEREAS, the City of Hanford Planning Agency, at the direction of the City of Hanford City Council, began the process to prepare the 2002 City of Hanford General Plan Update; and

WHEREAS, the "2002 Hanford General Plan Update" has been prepared by the City of Hanford Planning Agency with the assistance of Valley Planning Consultants of Madera in accordance with the provisions of the California Government Code; and

WHEREAS, the General Plan Update identifies new policies, changes land use designations and modifies other portions of the General Plan which results in a General Plan that is consistent with current law, is internally consistent, consolidates and coordinates policies from one element to another, and addresses the needs of the City and the people who live and work in the City; and

WHEREAS, a Program Environmental Impact Report (EIR) was prepared for the General Plan Update and circulated for public review and comment in compliance with all applicable requirements of the California Environmental Quality Act (CEQA) for the use of the City of Hanford Planning Commission and City of Hanford City Council in evaluating the environmental effects of the General Plan Update; and

WHEREAS, a public hearing was held by the Planning Commission on June 11, 2002 for the purpose of taking testimony and comments and receiving evidence on the EIR and General Plan Update which public hearing was noticed according to the requirements of the California Government Code 65090 et seq., and public testimony was heard; and

WHEREAS, after the close of said public hearing, the Planning Commission adopted a resolution recommending that the City Council certify as complete the EIR, adopt a statement of overriding considerations and adopt the 2002 General Plan, and

WHEREAS, a public hearing was held by the City Council on June 18, 2002 for the purpose of taking testimony and comments and receiving evidence on the Final EIR and General Plan Update which public hearing was noticed according to the requirements of the California Government Code 65090 et seq., and public testimony and evidence was heard and received, and

PREFACE

This Final Environmental Impact Report (Final EIR) has been prepared pursuant to the California Environmental Quality Act (CEQA) Guidelines in order to complete the environmental documentation for the Hanford General Plan Update 2002 ("Project"). The Final EIR completes the environmental process that was initiated with the release of a "Notice of Preparation" to solicit input on what issues should be studied in the Draft Environmental Impact Report (Draft EIR). The Draft EIR was then prepared and distributed for agency and public comments on the adequacy of the analysis, as well as, any new concerns that may have been discovered through the review process. The Draft EIR was circulated for public and agency review for 45 days beginning April 5, 2002 and closing on May 28, 2002.

This document, together with the Draft EIR for the Project, which is incorporated by reference, will constitute the Final EIR. The Final EIR will become an official statement of the environmental consequences attributed to the proposed project upon certification by the City of Hanford City Council. Approval or disapproval of the Project will occur at a public hearing before the Hanford City Council. Because the Hanford General Plan contains substantial policies, many of which are designed to mitigate potentially significant impacts or reduce significant impacts, a separate Mitigation Monitoring Program is not required . Projects that are proposed in the City of Hanford must be consistent with the General Plan and such findings are made by the City on a project by project basis. As such the General Plan constitutes a mitigation monitoring program required under Public Resources Code 21081.6. The reporting of compliance with such policies is the City's responsibility and is undertaken as part of the General Plan status report required annually by the California Government Code 65400(b).

The City may use this document in its review of projects proposed for development within the City. However, the City may require additional information or site specific studies on a project by project basis in evaluating future projects.

The information presented in this Final EIR has been provided in accordance with the requirements of the CEQA Guidelines and is organized into two sections, as follows:

> **Section I** contains individual responses to all comment letters received during the public review period for the Draft EIR. Copies of the comment letters are provided within this document. In the letters received during the public review period, comments are numbered on the copy of the letter, and the response to each of the numbered comments contained in a particular letter can be found on the page(s) immediately following the particular letter.
>
> **Section II** presents a list of all the agencies who were notified of the availability of the Draft EIR for public review, a copy of the Notice of Completion and other legal notices and transmittal documents.

Because the General Plan is a policy document and contains substantial mitigation measures and specific requirements for reporting progress on implementing the General Plan are required by the California Government Code, the General Plan is considered the Mitigation Monitoring and Reporting Program required under CEQA and is not contained in the Final EIR.

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse

ACKNOWLEDGEMENT OF RECEIPT

Gray Davis
GOVERNOR

Tal Finney
INTERIM DIRECTOR

DATE: April 30, 2002

TO: Jim Beath
City of Hanford
317 North Douty Street
Hanford, CA 93230

RECEIVED
MAY 06 2002
CITY OF HANFORD
COMMUNITY DEVELOPMENT DEPT

RE: City of Hanford General Plan Update 2002
SCH#: 2002021036

This is to acknowledge that the State Clearinghouse has received your environmental document for state review. The review period assigned by the State Clearinghouse is:

Review Start Date: April 8, 2002
Review End Date: May 28, 2002

We have distributed your document to the following agencies and departments:

California Highway Patrol
Caltrans, District 6
Caltrans, Division of Aeronautics
Department of Conservation
Department of Fish and Game, Region 4
Department of Housing and Community Development
Department of Parks and Recreation
Department of Water Resources
Office of Emergency Services
Reclamation Board
Regional Water Quality Control Bd., Region 5 (Fresno)
Resources Agency
San Francisco Bay Conservation and Development Commission
State Lands Commission

The State Clearinghouse will provide a closing letter with any state agency comments to your attention on the date following the close of the review period.

Thank you for your participation in the State Clearinghouse review process.

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
916-445-0613 FAX 916-323-3018 www.opr.ca.gov

SECTION I

WRITTEN COMMENTS AND RESPONSES

The following section contains comment letters received by various public agencies on the Draft EIR for the Hanford General Plan Update 2002 The response to these comments follows each letter. The comment letters have been assigned a number and comments contained in that letter have been assigned a sub-number, identified in the right-hand margin of the letter. Comments are responded to in order of assigned letter number and corresponding comment number.

Written comments were received from the following public agencies and individuals:

List of Commenters

California Department of Transportation, District 6
California Regional Water Quality Control Board
Department of Transportation Division of Aeronautics
Donald Christensen
Jack Schwartz

The City of Hanford Planning Commission held a public hearing on June 11, 2002 and the City Council will hold a Public Hearing on June 18, 2002 to take final testimony regarding the Draft EIR. Additional comments to the Final EIR may be added at the City Council meeting of June 18, 2002.

COMMENT LETTER 1

STATE OF CALIFORNIA - BUSINESS, TRANSPORTATION AND HOUSING AGENCY GRAY DAVIS, Governor

DEPARTMENT OF TRANSPORTATION
1352 WEST OLIVE AVENUE
P. O. BOX 12616
FRESNO, CA 93778-2616
TDD (559) 488-4066
OFFICE (559) 488-7306
FAX (559) 488-4088

May 17, 2002

2135-IGR/CEQA
6-KIN-GEN
DRAFT EIR CITY OF
HANFORD GP UPDATE 2002

Mr. Jim Beath, Planning Director
City of Hanford
Hanford Community Development Department
317 North Douty Street
Hanford, CA 93230

Dear Mr. Beath:

Thank you for the opportunity to review the Draft Environmental Impact Report for the City of Hanford General Plan 2002 Update. Caltrans has the following comments:

1. The segment of State Route (SR) 43 north of SR 198 is planned for a 4-lane expressway with 170 feet of right-of-way expanded at intersections. The State of California has acquired the access rights along the easterly right-of-way alignment north of SR 198. It is recommended that the City coordinate their planning efforts with the State to Plan Line for the future right-of-way requirements on these corridors and their local feeder street needs. Because of the expressway status no access will be granted except at ½-mile intervals.

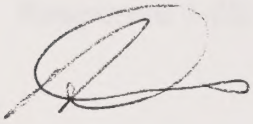
2. The General Plan indicates the SR 43 and other freeway corridors should be targeted for high density, mixed use development. How will the increased traffic impacts to these streets and highways be mitigated? Increased congestion on local roads can translate to increased congestion on State facilities as more people choose to travel on State routes to avoid overcrowded surface streets. Queuing at local intersections can impact the on and off-ramps of State routes. It is recommended that the City coordinate their planning efforts with the State to identify future demand on these corridors to examine viable alternatives to address these issues.

3. SR 198 has not been fully upgraded to a freeway. A Project Study Report has been prepared to construct an interchange at SR 198/9th street. The cost for the interchange is high. Caltrans believes the project is to be funded by Kings CAG.

4. Future signal locations on SR 43 are expected to include Hanford-Armona Road, the Junction of the SR 43/198 off-ramp, Grangeville Boulevard, Fargo Avenue, 10th Avenue, and Flint Avenue. Fargo Avenue will need to be realigned to be closer to a right-angle intersection.

Please be advised that any future development adjacent to a State Route, whether the entitlement is deemed by the lead agency to be discretionary or ministerial, should be sent to Caltrans for review. Also, please send a response to our comments and a copy of the Council resolution related to the proposed project. If you have any questions, please call me at (559) 488-7306.

Sincerely,



Al Dias
Office of Transportation Planning
District 6

C: Mr. Thomas Skinner

Comment Letter 1: California Department of Transportation, District 6, May 17, 2002

Response 1-01: Comment acknowledged. Policy CI 3.3 commits the City to work with Caltrans in meeting the improvement needs for SR 43 and 198 through the City.

Response 1-02: The General Plan contains several policies that point to the need to mitigate traffic impacts using traffic impact fees. The policies point the City's attention to identifying not only City street issues but highways as well. The EIR addressed the potential impacts on freeway interchanges at the 2025 study year and noted freeway on- and off-ramp improvements that may be required. Specifically policies CI 3.3, CI 3.4, CI 4.1, and Program 3.3-A address this issue.

Response 1-03: Comment acknowledged. The interchange at SR 198/9th Avenue is part of the Kings County Regional Transportation Plan. The project has not yet been programmed. Funding for the project is from the local share of the STIP funds.

Response 1-04: Comment acknowledged. Policy CI 3.3 commits the City to work with Caltrans in meeting the improvement needs for SR 43 and 198 through the City. Development on the eastside of the City requires preparation of a Specific Plan or Master Plan. This future planning effort should involve Caltrans in evaluating proposal for intersections with SR 43.

COMMENT LETTER 2

California Regional Water Quality Control Board

Central Valley Region

Robert Schneider, Chair

Winston H. Hickox
Secretary for Environmental Protection

Fresno Branch Office
Internet Address: http://www.swrcb.ca.gov/~rwqcb5
3614 East Ashlan Avenue, Fresno, California 93726
Phone (559) 445-5116 • FAX (559) 445-5910

Gray Davis
Governor

RECEIVED
MAY 10 2002
CITY OF HANFORD
COMMUNITY DEVELOPMENT DEPT

7 May 2002

Mr. Jim Beath
City of Hanford
317 North Douty Street
Hanford, CA 93230

DRAFT ENVIRONMENTAL IMPACT REPORT AND GENERAL PLAN (SCH# 2002021036), CITY OF HANFORD, KINGS COUNTY

We reviewed the City's Draft Environmental Impact Report (EIR), dated 3 April 2002, for the City's updated General Plan. The City last updated its General Plan in 1994. The proposed General Plan encompasses an additional 125 acres and addresses issues such as land use, circulation, hazards management, open space, conservation and recreation, and public facilities and services. The following is our comments to both the Draft EIR and General Plan.

1 Pages 4.16-8 and PF-13 of the Draft EIR and General Plan, respectively, indicate the capacity of the City's sewage collection lines is inadequate and that additional collection lines will be necessary to accommodate growth. The documents indicate that to resolve this issue, the City intends to investigate the use of satellite wastewater treatment facilities (WWTFs) in lieu of expanding trunk capacity and treatment capacity at the WWTF. The satellite WWTFs would produce tertiary wastewater and be located in areas where water is needed to irrigate open spaces or agricultural crops. This proposal is not consistent with the Regional Board's consolidation policy as described in *Water Quality Control Plan for the Tulare Lake Basin, Second Edition* (hereafter Basin Plan). This policy directs communities within the Tulare Lake Basin to consolidate their wastewater discharges to regional WWTFs (e.g., Selma-Kingsburg-Fowler WWTF). This enables the communities to efficiently and effectively use their resources and reduce the discharges' overall threat to the environment. This policy, by extension, also applies to the City of Hanford. To be consistent with the consolidation policy, the City should maintain one WWTF to accommodate existing and future wastewater flows within the City limits or its sphere of influence. If the City does proceed with the satellite WWTF option, it must justify to the satisfaction of the Regional Board why it should exempt the City from this requirement (e.g., it has adequate long-term resources to support the plan and that the addition of several smaller satellite WWTFs will not result in overall environmental impacts greater than if the City utilized one WWTF). The Draft EIR and General Plan should include a discussion of the Regional Board's consolidation policy and how it intends to comply or how justify an exemption.

2 Page PF-13 of the General Plan specifically addresses how the City will ensure new development will eventually be connected to the City's sewer system, but does not address how it will identify and ensure existing residential, commercial, and industrial developments within the City limits that are not connected (e.g., using septic tank systems, etc.) will be connected to the WWTF in a timely manner. The Basin Plan directs City's to connect existing and new development within and adjacent to City

limits to the WWTF. The General Plan should address this issue and include a time schedule or detailed plan as appropriate. We are particularly concerned about discharges of industrial wastes to land beyond City limits from industries within the City's limits or sphere of influence (e.g., the unpermitted discharge to dairy lagoons by Marquez Brothers' Cheese Processing Plant).

3 Page 4.16-10 of the Draft EIR indicates that the City plans to use the additional 1,600 acres it purchased for wastewater "disposal." This should be clarified. The term disposal is generally referred to as discharging wastewater for non-beneficial uses (e.g., pond disposal or discharge to fallow land). To be consistent with the Basin Plan, we recommend the EIR and General Plan be revised to indicate that the land will be used for recycling effluent on cropped lands at agronomic rates.

4 Page PF-13 of the General Plan states the following objective: "ensure provision of sufficient wastewater collection and treatment facilities to support the existing and future development at General Plan build out." We recommend the City revise this objective to include that the City will also provide adequate disposal capacity maximizing reuse and recycling of wastewater on agricultural lands whenever possible.

5 Page 4.16-14 includes discussion regarding storm water requirements. The City may want to consider the following and include discussions in the Draft EIR and General Plan, as appropriate.

The City will most likely be designated as a small municipally separate storm sewer system (MS4) and will be required to comply with Phase II of the Storm Water regulations. Regulations for the Phase II Storm Water Program were published in the Federal Register on 8 December 1999 and expand the program to include small MS4s. The State and Regional Boards are required to issue permits for the new Phase II regulations by 9 December 2002.

In general, the regulations require small MS4s to develop and implement a storm water management plan that includes six categories of control measures to reduce pollutants in storm water runoff. These control measures include public education; public participation; illicit discharge detection and elimination; construction site storm water runoff control; post construction storm water management; and pollution prevention/ good housekeeping for municipal operations.

Should you have any questions concerning the above, please contact Alexis Phillips-Dowell at (559) 445-5500. If you have questions or need additional information regarding Phase II Storm Water regulations, please contact Brian Erlandsen at (559) 445-6071.

Jo Anne Kipps

JO ANNE KIPPS
Senior Engineer
RCE No. 49278

cc: Scott Morgan, State Clearinghouse, Sacramento

ARP: hanfordgeneralplan.doc
N15 / A/HANFORD, CITY OF/WWTF/SD160103001

Comment Letter 2: California Regional Water Quality Control Board, May 7, 2002

Response 2-01: The City's intent of mentioning alternatives to extending the 9th Avenue sewer connection to the City's existing wastewater treatment facility is to acknowledge that there may be other alternatives to be explored. Granted such alternatives may be in opposition to the adopted Tulare Lake Basin Plan, however such options must still be mentioned despite the apparent difficulty in implementing such options. The General Plan takes care in promoting extension of the 9th Avenue sewer to serve the eastside as perhaps the most cost effective and acceptable alternative. The City recognizes its responsibility to address the Basin Plan in any alternative discussion that may be engaged in with regard to serving the eastside of the City.

Response 2-02: The City abides by the regulations of the State of California that require connection to a public sewer system when such system is available within 200 feet of a structure. Beyond that requirement, the City requires connection of structures when such structures require maintenance of on-site systems and sewer is available within a reasonable distance.

The City acknowledges the Board's concern for discharges of industrial wastes from industries in the City to lands outside the City. Such enforcement issues are beyond the scope of the General Plan.

Response 2-03: The General Plan text and EIR will be amended to replace the word "disposal" with the phrase "recycling effluent on cropped lands at agronomic rates".

Response 2-04: The General Plan Objective PF 6 will be amended to include "will also provide adequate disposal capaicty maximizing reuse and recycling of wastewater on agricultural lands whenever possible".

Response 2-05: Page 4.16-14, Section 4.16.5.a of the DEIR is amended to include the following additional language:

"The City anticipates that it will be designated as a small municipally separate storm sewer system (MS4) and will be required to comply with Phase II of the Storm Water regulations. Regulations for the Phase II Storm Water Program were published in the Federal Register on 8 December 1999 and expand the program to include small MS4s. The State and Regional boards are

required to issue permits for the new Phase II regulations by 9 December, 2002.

In general, the regulations require small MS4s to develop and implement a storm water management plan that includes six categories of control measures to reduce pollutants in storm water runoff. These control measures include public education, public participation, illicit discharge detection and elimination; construction site storm water runoff control; post construction storm water management; and pollution prevention/good housekeeping for municipal operations.

The General Plan will be amended to add Policy PF 8.4 as follows:

Policy PF 8.4
The City will comply with regulations promulgated by the Federal Government and the State of California requiring the development and implementation of a storm water management plan and to obtain the appropriate permits that may be issued to serve the community.

COMMENT LETTER 3

DEPARTMENT OF TRANSPORTATION
DIVISION OF AERONAUTICS – M.S.#40
1120 N STREET
P. O. BOX 942873
SACRAMENTO, CA 94273-0001
PHONE (916) 654-4959
FAX (916) 653-9531

Flex your power!
Be energy efficient!

May 24, 2002

Mr. Jim Beath
City of Hanford
317 North Douty Street
Hanford, CA 93230

Dear Mr. Beath:

Re: *City of Hanford General Plan Update 2002 & Draft EIR; SCH# 2002021036*

The California Department of Transportation, Division of Aeronautics, reviewed the above-referenced document with respect to airport-related noise and safety impacts and regional aviation land use planning issues pursuant to CEQA. The following comments are offered for your consideration.

The proposal is for an update to the City of Hanford General Plan. Hanford Municipal Airport is an active public airport located within the City of Hanford. While the 2002 General Plan Update recognizes the importance of the Airport, an ongoing concern facing public use airports throughout California is encroachment by incompatible land uses. Included in the Hazards Management Element of the General Plan Update are airport-related Policies HZ 4.1, HZ 4.2 and HZ 4.3. The objective of these policies is to protect the safety of persons on the ground from aircraft crash hazard potentials, and protect the safety of aircraft in flight. We support this objective and we encourage implementing policies that address airport noise impact areas as well.

1 The 1995 Draft Environmental Impact Report/Environmental Assessment (EIR/EA) for the Hanford Municipal Airport Master Plan recommended enhancing City and County policies to include the 55 CNEL noise contour along with "Compatibility Zones A, B1, B2 and C" from the draft Kings County Airport Land Use Commission's (ALUC) Airport Land Use Compatibility Plan (ALUCP). The EIR/EA recommended including the ALUCP Compatibility Zone C to reflect the future noise impact areas as depicted by the airport noise contours in Exhibit 4-5. The EIR/EA states that "being exposed to the greater part of noise generated by departing aircraft, the ability of the City to implement this policy is particularly important." We agree.

We also request the following changes to Policy HZ 4.2:

- Are the terms "Clear Zones A and B" the same as Compatibility Zones A and B in Figure 3B of the ALUCP? This should be clarified. An airport zone designation map depicting all of the airport safety zones and the 55 CNEL and greater noise contours would be extremely beneficial.

2

- The Federal Aviation Administration (FAA) regulation for limiting structural height is entitled Federal Aviation Regulations (FAR) Part 77. We have enclosed copies of FAR Part 77 and the Advisory Circular (AC) 70-7460-2K entitled "Proposed Construction or Alteration of Objects that May Affect the Navigable Airspace."

- Program HZ 4.2-A-Typo "30ofeet" should be corrected.

We have enclosed a copy of Education Section 17215, which addresses the need for a school site evaluation by the Division of Aeronautics prior to acquisition by a school district for land within two miles of an airport runway. We have also enclosed FAA Advisory Circulars AC 150/5200-33 "Hazardous Wildlife Attractants on or Near Airports" and AC 150/5200-34 "Construction or Establishment of Landfills Near Public Airports."

3

The Department has recently released the January 2002 update to the California Airport Land Use Planning Handbook. Copies of the Handbook will be mailed out in the near future. The Handbook can also be accessed through the Division of Aeronautics, Office of Technical Services, website at www.dot.ca.gov/aeronautics. Section 21096 of CEQA requires use of the Handbook in the preparation of an environmental document for a project within two nautical miles of a public use airport.

The need for compatible and safe land uses near airports in California is both a local and a state issue. Along with protecting individuals who reside or work near an airport, the Division of Aeronautics views each of the 250 public use airports in California as part of the statewide transportation system, which is vital to the state's continued prosperity. This role will no doubt increase as California's population continues to grow and the need for efficient mobility becomes more crucial. We strongly feel that the protection of airports from incompatible land use encroachment is vital to California's economic future.

These comments reflect the areas of concern to the Department's Division of Aeronautics with respect to airport-related noise and safety impacts and regional airport land use planning issues. We advise you to contact our district office concerning surface transportation issues.

Thank you for the opportunity to review and comment on this proposal. If you have any questions, please call me at (916) 654-5314.

Sincerely,

Sandy Hesnard

SANDY HESNARD
Aviation Environmental Planner

Enclosures
c: State Clearinghouse, Hanford Mun Airport, Kings County Planning

Comment Letter 3: Department of Transportation, Division of Aeronautics – MS#40, May 24, 2002

Response 3-01: Page 4.11-14, Figure 4.11-4 is hereby replaced with Exhibit 4-5 of the Final Environmental Impact Report/Environmental Assessment, Hanford Municipal Airport, Airport Master Plan Improvements, Hanford, California (May 8, 1996). The exhibit is attached on the following page.

Response 3-02: Program HZ 4.2-A is amended as follows:

The Land Use Element of the Hanford General Plan and the Hanford Zoning Ordinance shall be used to restrict potentially hazardous land uses from being established within Compatibility Zones A and B of the Hanford Airport Land Use Compatibility Plan. Compatibility Zone A is the area nearest the airport runway where the probability of an accident and the impact of noise are the greatest. The following restrictions would apply in Compatibility Zone A:

No new residential construction.

No new schools, churches, or other facilities accommodating large groups of people.

Height limitations of structures shall be in conformance with Federal Aviation Administration regulations.

No new structure shall be built within 300 feet of the centerline of the runway or 1,000 feet from the ends of the runway.

Compatibility Zone B is the area immediately adjacent to Zone A, where the probability of an accident is lower than in Zone A and where there may be unacceptable noise levels. The following restrictions apply in Compatibility Zone B:

Creation of new residential lots will be prohibited.

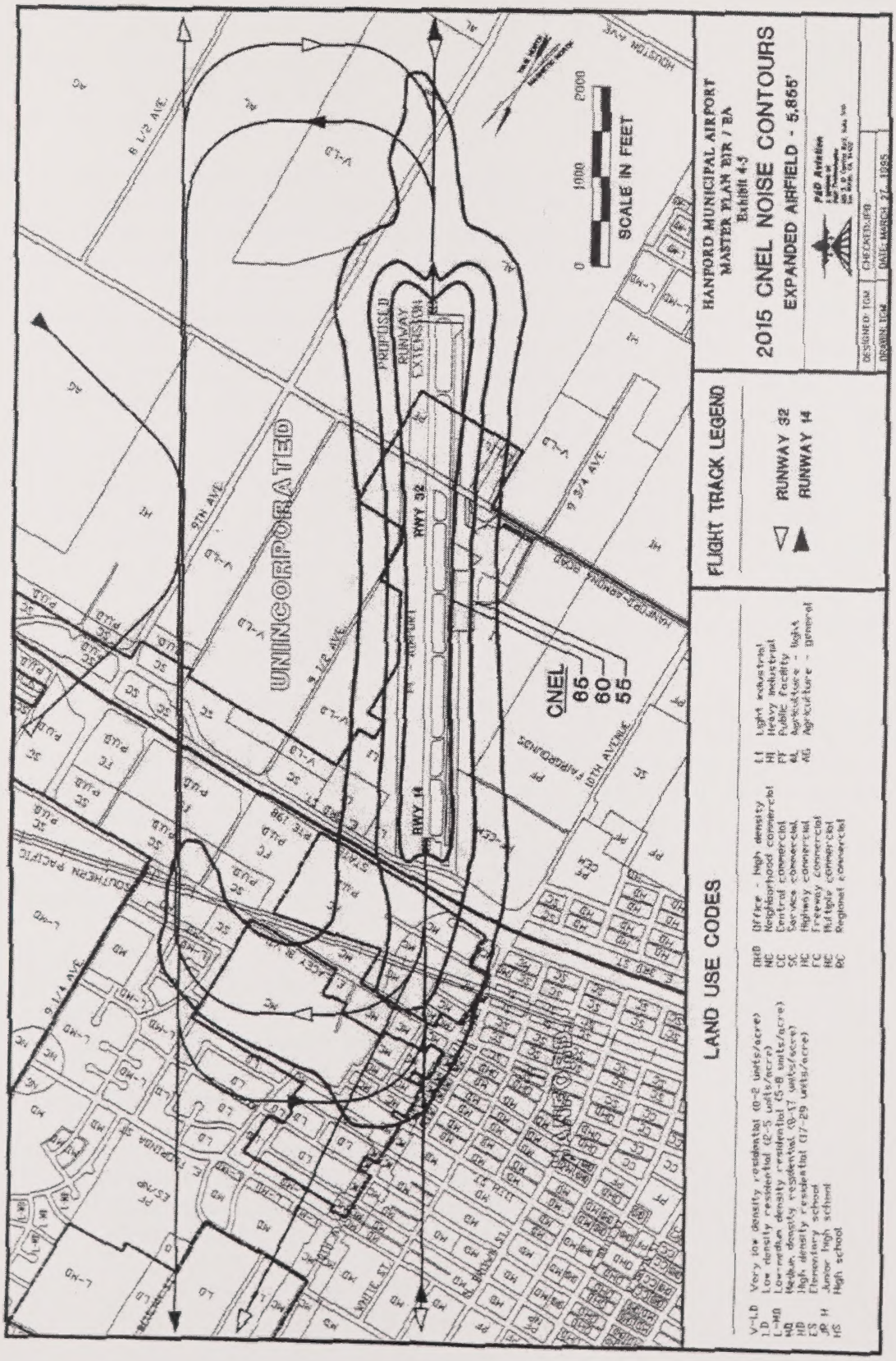
New single family residential construction may be allowed on existing lots on a case-by-case basis after evaluation for potential hazards.

No new schools, churches, or other facilities accommodating large groups of people may be constructed.

Height limitations of structures shall be in conformance with Federal Aviation Administration regulations ([FAR] Part 77).

No new structure may be built within 300 feet of the center line of the runway or 1,000 feet from the ends of the runway.

Response 3-03: Comment acknowledged. The provided document will be kept on file with the Hanford Community Development Department for future reference.


HANFORD MUNICIPAL AIRPORT
MASTER PLAN EIR / EA
Exhibit 4.3
2015 CNEL NOISE CONTOURS
EXPANDED AIRFIELD - 5,865'
DESIGNED: TGM
DRAWN: TGM
DATE: MARCH 27, 1995
FLIGHT TRACK LEGEND
RUNWAY 32
RUNWAY 14
LAND USE CODES
Very low density residential (0-2 units/acre)
Low density residential (2-5 units/acre)
Low-medium density residential (5-8 units/acre)
Medium density residential (8-17 units/acre)
High density residential (17-29 units/acre)
Elementary school
Junior high school
High school
Office - high density
Neighborhood commercial
Central commercial
Service commercial
Highway commercial
Freeway commercial
Multiple commercial
Regional commercial
Light industrial
Heavy industrial
Public facility
Agriculture - light
Agriculture - general
CNEL
65
60
55
UNINCORPORATED
RWY 32
RWY 14
PROPOSED RUNWAY EXTENSION
SCALE IN FEET
0
1000
2000

COMMENT LETTER 4

May 19, 2002
To: Hanford Planning Commission
Hanford City Council and Staff
From: Donald Christensen,
Citizen/Architect/ Planner
Subject: Comments on General Plan Update

The 2002 Update of the Hanford General Plan is nearing completion. I have not been involved in the process as a citizen, not due to lack of interest or concern, but mainly because I had not heard it was in process, and secondly because we have been out of town a lot lately, I would have missed many of the meetings.

The recent news that we are in a region with severe air quality problems, and also that we may have serious water quality and supply issues locally, gives a focus to the comments I have regarding the physical structure of our city, and how the policies of the new General Plan may affect us.

The fact that one person in 6 in this valley is affected by asthma or other respiratory problems, and the recent news that bad air has been linked to 1,300 deaths per year, make it imperative to frame our planning to reduce as much as possible those things that contribute to degradation of our air and water. Chief among these is our dependence on the automobile, which is a heavy contributor to pollution, as well as consuming a large portion of a family's disposable income. Our past, and sometimes present, planning policies leave us little option but to be totally dependent on the auto (or two or three per family) to function in our daily lives.

In 1991, a group of leading architects and planners gathered to try to address these problems. After much analysis and careful thought, they produced a document called "The Ahwahnee Principles". I am enclosing a reprint of an article from the League of California Cities Magazine describing the problems and the context of the development of these Principles. Since then, many cities have incorporated these forward-looking concepts into their General and Specific Plans processes. They can be adapted to existing city areas, as infills to make older neighborhoods more functional and livable, as well as to form the basis for the planning of future growth areas.

I am convinced that if we care about making Hanford a more livable city, able to compete for employment and residents with our neighboring cities, we must make a sincere, consistent and continuing effort to address these problems. Many other cities are doing just that, and some have a considerable head start in implementing these improvements.

Direction of Growth

Many of us, me included, have been bothered by the extreme western bias to our plans for future growth. However, due to historical factors, land ownership, the desire to accommodate regional retail growth, and the subsequent financial liabilities of the City's funding of major sewer and water lines to the west, by the City, it is a *fait accompli*, and

1 we must live with the consequences, both good and bad. I understand that the City now feels they must actively promote western city development, as a means of more rapidly repaying the sewer and other infrastructure bonds. Most of us who understand that are reconciled to it. However, we still need to recognize the down sides to over-committing to one side of the community. If, in 10 or 20 years, we have built a "new town" centered on Twelfth Avenue, while the remainder of Hanford languishes, there will be severe negative consequences. I would plead that: 1) New development will happen fast enough to the West, without force-feeding by the City, 2) We must strike a balance by actively promoting infill and new additions in the rest of the City, 3) Sewer and water line financing must not be the Tail that wags the Community dog, 4) Emphasize quality vs. quantity, when accommodating new growth. 5) Perhaps most important, take the planning steps needed to create balanced, fully functional neighborhoods, not the scattered residential tracts without related community services, that we often get.

Building Livable Neighborhoods

2 Let's look at our existing Hanford residential areas. Some are provided with day-to-day services needed by residents, such as neighborhood shopping, basic home services, day care, parks, recreation, and family social services such as Family Resource Centers. Some have some of these, while others have almost none. It should be a policy that the City does everything possible to make every major neighborhood a Fully Serviced neighborhood. What is meant by that is that residents should be able to find services that are needed on a day-to-day basis in their neighborhood, without having to drive half or all the way across the City.

The residential neighborhood has traditionally been the basic" building block" of cities. In the U.S. and California, the residential neighborhood is usually defined as an area of residences, one mile square, with a neighborhood services cluster at its center. Ideally, the facilities found in a services cluster include:

1) Neighborhood Commercial, 3 to 5 acres, (see General Plan for ingredients)
2) Neighborhood Park (or) Elementary School with adjacent park/playground
3) Family Resource Center, to include services such as Day-Care facility, Head Start, Latch Key, and for some neighborhoods, a Recreation/Community Multi-purpose Room, Senior Lounge, And rooms for periodic services such as health clinic, mental health counseling, job counseling, paralegal services, community police room, voting booths, etc.

This Neighborhood Services Cluster should be master-planned as a unit, to realize the best land use and relationship between the various components. It should be at the center of the neighborhood, such that it is no more than 10 minutes walk from the farthest ring of residences. Very importantly, the street and sidewalk pattern should be arranged that the Cluster may be reached in the most direct route from all sides of the neighborhood. It should truly function as THE neighborhood meeting place. The population of a neighborhood may vary from 4,000 to 8,000, depending on the proportions of various residential densities. This is generally enough population to sustain services cluster as outlined above. Such a neighborhood can become much more than a simple assemblage of housing tracts. It can become a unit with which the residents can identify much as happens with a small town.

That is the pattern of the optimally planned neighborhood. In some of the growth areas of the Updated Hanford General Plan, a neighborhood commercial zone, sometimes with a park/drainage basin, and some medium density housing zones, is shown. These are generally spaced one or more miles apart. They could and should work, if developed with the pattern and ingredients described above.

3 In the actual Hanford of today, we have some fairly functional neighborhoods, and others that lack some critical services, and still others that are just housing tracts and individual houses or apartments, with no real center or core services.

The large section of north Hanford, roughly north of Terrace Drive and West of Kensington Way, has a population of close to 10,000, but no commercial center. The only public facilities are Monroe School and Hidden Valley Park. Residents here must drive out for all services. When the zoned neighborhood commercial area develops at the corner of Fargo and 11th Ave., this should become a less auto-dependent neighborhood. Hopefully a supermarket will be an anchor commercial use.

To the east, the area north of Leland Drive and east of Kensington Way, out to Highway 43, does have a commercial core, with the new drug store and the NorthGate Shopping Center at N. 10th and Fargo. The developer of much of the area east of 10th Ave, Paul Daley, realized that his houses and apartments would be much more desirable with convenient commercial services, and developed the NorthGate Center. This is one of the better neighborhood examples in Hanford, though other related recreational, day-care, and family resource type services are not yet in place.

South of this, the Simply Food Supermarket and related neighborhood shops are a core for this neighborhood. Again there are no social services, but a good day-care center east on Grangeville, and no recreation areas other than provided by Hanford High School.

The area west of Kensington , north to Cortner, south to Florinda, and west to the railroad is served by the commercial at 11th and Grangeville, anchored by Save-Mart and Walgreen Drugs. Social services are mostly lacking, and the main recreation areas are at Jefferson School and the YMCA. It is a 10 minute or less walk to this corner from most of this neighborhood, so the goal of accessing neighborhood services without driving is possible, as it is at the 10th/Grangeville Center.

4 The areas west of the railroad and north of Greenfield, again, are without services, except for recreation space at the new Simas Elementary School..The new General Plan, as it is now depicted on the map, shows no area for future neighborhood commercial services until one goes more than a mile west on Grangeville, which will be several years in materializing at that location. We should re-think this area, so that people are not forced to drive for the most basic of services.

Kings Mall Manor subdivision is an interesting case. Most of it is a 10 minute walk or less from the Hanford Towne Center. This is a Community Commercial center, but it also serves as a neighborhood center. Lacey West Apartments, the condos and apartments on Greenfield, and the neighborhood north and west of the Hanford Plunge are also within a 10-minute range. These fortunate people also have medical services an H.C.M.C., and recreation space at Hanford West High School, The Little League Park, and at Woodrow Wilson School, and restaurants on West Lacey Blvd. And if they are a County or High School , or Hospital employee, they have a 5 minute commute, or 10 minutes if walking.

5 Central Hanford has access to shops downtown, (groceries at United Market and the Grocery Outlet), and medical services at Central Valley Hospital on Douty, also recreation at Lacey Park and the Plunge and Civic Center Park. The Salvation Army provides some social services. The City has a Teen Center at the Civic Auditorium, and the Veteran's and Seniors Center. What this neighborhood needs is more apartment and condominium housing replacing aging housing north and east of downtown. This would also give downtown a boost with more housing within walking distance of downtown services and shops and entertainment

6 East Hanford, defined as the area between Brown Street, Grangeville Blvd., Highway 43 and Lacey Blvd. has only some minor commercial services along 10th Ave., Residents must drive a mile to reach the nearest supermarket (Simply Foods), and two to over three miles to reach any of the other local supermarkets. There are few churches and no public social services that I know of in this whole area. This is perhaps the most neglected and underserved "close in" neighborhood. Apart from the recreation areas provided with Lee Richmond and Kennedy Jr. High, there is no public investment. The City is widening and improving 10th Avenue, but this is more for the convenience of through traffic, than for this neighborhood. East Hanford is almost in the position today, that South Hanford held after the 198 freeway went in the late 1960's. Back then, the City built the new Longfield Recreation Center, across from Coe Park. If the City expects future residential growth to happen in 5 to 10 years to the east of 9 ¼ Ave., some City investments

of this type must be made to keep East Hanford viable. In the Mixed Commercial Zone along 10th Ave., the City needs to help by stimulating the development of new neighborhood commercial, along with needed day-care and social services, perhaps working with the Children and Families Commission for funding, along with KCAO and others. A community park is needed, certainly, like Centennial Park, but neighborhood commercial and social services, in conjunction with a mini-park, is an even more critical need.

South Hanford has one supermarket, R-N Market. There is little commercial other than that available to this neighborhood, other than along South Eleventh Avenue. They are well served by Longfield Center, Coe Park, the Brown Street Park, Lincoln School, KCAO Day Care, the Rehab. Center and the new Soccer Fields Complex. The abundance of recreational and social services somewhat compensates for the lack of commercial services. Residents here can walk to Downtown Hanford in 10 minutes, but they must drive to get to most other services or commercial.

7 I guess what I have been trying to point out through all of the preceding discussion, is that the times demand that the City be more pro-active in creating new "whole" and balanced neighborhoods, and Also to work with partners and the private sector to make existing neighborhoods that have no real commercial and social and recreational "heart" into "whole" neighborhoods. This is the best insurance against dependence on the private automobile, the best way to mitigate air pollution problems, the best way to prevent blighted neighborhoods over time and to show private investors that these neighborhoods are worth their time and effort and dollar investments.

8 Please take time to read the attached article on "The Awahnee Principles". It is a sensible approach, and it is increasingly being applied, with local variations, in more and more cities in California and nationwide. Those cities that ignore the problems that T.A.P offers answers for are falling farther behind. I would like to see more language added to your General Plan to ensure that the City holds to the path of resource efficiency, to make its citizens less dependent on automobiles in their daily lives, and to pro-actively work to make balanced, whole neighborhoods, whether they are existing or new.

I can be reached by phone at 582-1700, if you have any comments or questions.

Comment Letter 4: Donald Christensen, May 19, 2002.

The City appreciates the thoughtfulness and the level of detail analysis provided in the comment letter. It is unfortunate that you could not have played an active role in the General Plan Citizens Advisory Committee. This General Plan Update reflects on the changes from the 1994 General Plan. The 1994 General Plan was a substantial change in planning from previous plans. Many of the principals of the "liveable cities" and yet to be published "Ahwahnee Principals" found their way into the planning concept for the City of Hanford. Neighborhood orientation and greater reliance on public transportation are well grounded in the general plan. The City agrees that implementation of these concepts over time will be fundamental to the success of the planning effort. One only needs to look at the remarkable increase in ridership in the KART system between 1993 and 2000 to appreciate the impact mutually supporting land use and service delivery systems. However, expansion of successful community support systems depends largely on the availability of funds and the priorities of Federal, State, and local programs. While the City may have limited resources to implement such programs, its obligation is not to foreclose the possibility of such programs by poor land use planning. The City of Hanford takes that responsibility seriously.

Response 4-01: The General Plan assumptions tend to reflect the reality of growth directions. Significant public investment has been made in the 12th Avenue sewer system and it removed significant constraints to growth in western Hanford. That decision was made many years ago. The City is not promoting western expansion of the City, only responding to the initiatives of landowners for development opportunities. Throughout the General Plan growth on the eastern side of the City is left open and is desirable to balance growth. However, the burden of extending sewer to allow such growth rests on the property owners to guarantee public expenditure for infrastructure expansion. Until such commitments are forthcoming, it would be impossible to make any level of unilateral investment by the City. Any investment on the part of the City would have to rely on a guaranteed source of debt service repayment capability. Typically, public financing opportunities will not use speculative future development as a source of that guarantee. Utility rates are often the sole source of public investment guarantees. A substantial increase in City utility rates would be necessary to develop a new debt service capacity. With all of the increased demands being placed on the City from Federal and State agencies (water, wastewater, drainage) our utility user fee structure carries a substantial burden. City utility rate payers are reluctant and are often adamant that those rates remain as low as possible.

Response 4-02: The General Plan provides a land use map that integrates

neighborhood services at ultimate build-out. While through the build-out process some of these service nodes may not be evident, ultimately they will be in place. The market demands for retail and service industry typically drives the emergence of commercial nodes. Providing family and social services is beyond the City's current capability and the community has to rely on Federal and State service delivery agencies to accommodate community needs. In tight budgetary times, we all have to rely on partnerships to do the best we can to make space in public buildings for such services and attract those in greatest need. We have all been impressed with more effluent communities along the coast that have substantial property values and employment bases to generate large tax revenue bases for local government to provide such services. These higher profile communities often receive disproportionate Federal and State attention to community needs. Even smaller San Joaquin and Sacramento Valley communities that have universities with many volunteer students can muster outreach programs and document those successes for our consumption and envy. However, Hanford must do what it can given our dwindling resources to make ends meet and maintain adequate public protection and community services. Our General Plan is based on pragmatic achievable objectives and policies. It would well not serve the community to incorporate goals we did not see doable.

Response 4-03: The "snap shot" of Hanford today will find inadequacies of incomplete implementation of the General Plan leaving some neighborhoods under served. Our long-term objective is to develop a fully implemented General Plan where all neighborhoods are served to the extent feasible.

Response 4-04: The area referenced was analyzed in the 1994 General Plan and changes little in the 2002 Update. This area with 12th Avenue and Grangeville as its centroid presents a plan implementation exception. Early in the analysis it was recognized that a neighborhood commercial center should be near this intersection. However, there is a major commercial center at 11th and Grangeville and a major commercial area at 12th and Lacey. In our analysis we rejected the establishment of another commercial node at 12th and Grangeville for a number of reasons. First because 12th and Grangeville is the intersection of two major arterials and the pressure to expand neighborhood commercial to a larger and more complex commercial center would be tremendous. Not allowing any commercial at this intersection seems appropriate. Second, three quadrants of the intersection are basically occupied by residential uses and planned residential uses. Placement of commercial

designations may be in opposition to the desires of existing residential property owners and the commercial use would not happen. The remaining quadrant would have exclusive rights to commercial development (which may or may not be positive). Third, the proximity to other intensively developed commercial areas is acceptable, recognizing the limited crossings of the B.N.S.F. tracks. Fourth, the south side of Grangeville is already developed and the north side has a fragmented property ownership pattern. There is uncertainty with the pattern of development. The General Plan can be amended provided a compelling and well conceived argument can be mustered for Neighborhood Commercial in this area, perhaps as part of a master plan supported by all of the effected property owners.

Response 4-05: The land use map for the subject area designates it as Medium Density Residential that would allow for a higher density than now exists. Your notion of redeveloping this area is considered practical and typically carried out by a Redevelopment Agency in a project area. The powers of the Redevelopment Agency allow it to aggregate land for redevelopment purposes and negotiate with builders to achieve of a desired type and value. The City may soon be working on considering a Redevelopment Project Area for the downtown and such suggestions appear very appropriate for that venue.

Response 4-06: The General Plan provides for future opportunities for commercial and recreational activities in the area beyond 91/4 Avenue. The General Plan provides additional guidance for development of mixed uses along 10th Avenue as it is widened into a major arterial street. This investment should promote development and redevelopment of existing uses as the street becomes more heavily traveled and can accommodate such traffic without the congestion we now face. Much of this are is not within the incorporated territory of the City. Residential areas must make the decision to seek annexation to the City before City resources can be spent in much of the area. Just as in other areas of the City the delivery of social services requires a partnership between service delivery agencies and recognition on their part that there are unmet community needs in specific neighborhoods.

Response 4-07: The City continues to support partnerships necessary to provide a range of services to neighborhoods in the City. The General Plan is only one of various methods to accomplish this objective. The General Plan contains many practical policies and programs to minimize dependency on automobiles and promote alternative transportation modes. Addressing redevelopment in older

neighborhoods, we agree will restore private sector interest. Proposing and adopting a Redevelopment Project Area requires the support of property owners in those neighborhoods

Response 4-08: The 1994 General Plan applied many of the principals discussed in the article you attached long before they became well accepted. Hanford applied the notions to meet the needs of a small central valley community and has held to those policies. The General Plan reinforces that the downtown should remain the cultural and business center of the community. The General Plan provides nodes of commercial and job related businesses throughout the Planning Area which are easily accessible from nearby neighborhoods as well as provides for expansion of alternative transportation modes. Hanford General Plan contains a number of policies to maintain its urban boundaries surrounded by open space as agriculture. Fortunately, Hanford does not have the same problems that San Diego, Walnut Creek, Santa Barbara, or Los Angeles and we do not expect them. We have taken great care in including standards in the General Plan that balance economic realities with design considerations. Tree lined streets are desirable so long as the cost of maintenance can be born by the community. Narrow streets may reduce traffic speeds in neighborhoods, however when narrow streets result in parking congestion and are detrimental to service delivery (such as garbage collection without stopping all traffic on a street), or constitute safety impediments (emergency vehicles blocking traffic from getting into or out of a neighborhood) they become counter productive to livable neighborhoods. The General Plan continues to leave the door open to new and creative ideas in neighborhood development whether based on the Ahwahnee Principals or some other design concept practical in the central valley.

COMMENT LETTER 5

COMMENTS ON DRAFT EIR

Jim- I have not taken much time to peruse the draft EIR. Generally it looks good. Some of the comments I made on the General Plan Update also apply to the EIR.

1 Regarding Noise; I think that gas-powered leaf blowers, used by most of the lawn maintenance businesses should be prohibited. They make an awful noise, and in addition they cause air pollution by getting PM 10 into the air, and they emit excessive pollution from their exhaust.

2 Also, I believe that the city should consider the noise element when they purchase refuse trucks. [Maybe they do.]

Jack

Jack Schwartz

Comment Letter 5: Jack Schwartz, undated.

Response 5-01: The General Plan addresses broad development issues with regard to land uses and traffic generated noise. Issues relating to the tools used by private individuals must be addressed as nuisances under the Municipal Code. Issues relating to PM 10 generation and other air quality degradation should be addressed by the Regional Air Quality Control Board or the State Air Resources Board. We are aware to pending regulations that may curtail the use of leaf blowers as an air quality mitigation measure statewide.

Response 5-02: Manufactures of Heavy equipment and trucks are required to meet decible standards among operational characteristics of equipment. Variance in noise produced from this equipment may be due to condition of repair and use by the operator. Similar to leaf blower noise, loud vehicles are addressed as nuisances and should be reported as such.

SECTION II

Hanford General Plan Final EIR
Distribution List

Department of Transportation
Division of Aeronautics – M.S.#40
P.O. Box 942873
Sacramento, CA 94273-0001
Attn: Sandy Hesnard

California Regional Water Quality Control Board
Central Valley Region
3614 East Ashlan Avenue
Fresno, Ca. 93721
Attn: Alexis Phillips-Dowell

Department of Transportation
1352 West Olive Avenue
Fresno, Ca 93778-2616
Attn: Al Dias

Donald Christensen
1046 Hansen Ct.
Hanford, Ca 93230

Jack Schwartz
1603 N. Irwin Street
Hanford, Ca 93230

CITY OF HANFORD

GENERAL PLAN UPDATE 2002

DRAFT ENVIRONMENTAL IMPACT REPORT

VOLUME 1

DRAFT EIR AND GENERAL PLAN

PREPARED FOR THE CITY OF HANFORD

BY VALLEY PLANNING CONSULTANTS, INC.

APRIL 2002

CITY OF HANFORD

GENERAL PLAN UPDATE 2002

DRAFT ENVIRONMENTAL IMPACT REPORT

VOLUME 1

DRAFT EIR AND GENERAL PLAN

PREPARED FOR THE CITY OF HANFORD

COMMUNITY DEVELOPMENT DEPARTMENT
JAMES BEATH, DIRECTOR

BY VALLEY PLANNING CONSULTANTS, INC.
200 N. GATEWAY DRIVE #101
MADERA, CA 93637
559-675-8724

WITH THE ASSISTANCE OF
KD ANDERSON TRANSPORTATION ENGINEERS
PROVOST AND PRITCHARD ENGINEERING
SIERRA VALLEY CULTURAL PLANNING

APRIL 2002

CITY OF HANFORD
State Clearinghouse Transmittal Letter for Environmental Documents

Date: April 3, 2002

To: State Clearinghouse
Office of Planning & Research
1400 10th Street, #121
Sacramento, CA 95814

From: Lead Agency:
City of Hanford
317 North Douty Street
Hanford, CA 93230

Subject: City of Hanford General Plan Update 2002 (SCH # 2002021036)

Enclosed please find fifteen (15) copies of the above named environmental document for review, comments, recommendations and distribution to other State agencies, which have jurisdiction over one or more aspects of the project. Also enclosed is the "Notice of Completion and Environmental Document Transmittal Form" and a list of agencies to which this document and related Public Notice of Availability has been directly sent.

Please schedule the review period to end on May 20, 2002 and return all comments to the above noted Lead Agency address.

If you have any questions or comments regarding this matter, please contact Mr. Jim Beath, Planning Director, City of Hanford (559-585-2583)

Jim Beath

Mr. Jim Beath,
Community Development Director, City of Hanford

CITY OF HANFORD
Environmental Document Transmittal Letter

Date: April 3, 2002

To: (See Attached List)

From: Lead Agency
City of Hanford
Mr. Jim Beath, Planning Director
317 North Douty Street
Hanford, CA 93230

Subject: City of Hanford General Plan Update 2002 (SCH # 2002021036)

Enclosed is a copy of the Public Notice of Availability for the above named environmental document. A copy of the environmental document is being transmitted to each "Responsible", "Trustee", and other public agency included on the attached list, which may exercises authority over resources that may be affected by the project or which has jurisdiction by law over some aspect of the project. Anyone not identified on the attached may obtain a copy of the above named environmental document by contacting the above noted Lead Agency at (559) 585-2583.

Any written comments regarding the above named environmental document must be received at the Lead Agency address no later than 5:00 p.m., May 20, 2002. Facsimiles will not be accepted. If no comments are received by the date indicated, it will be assumed that the document is acceptable. Further information may be obtained by contacting Mr. Jim Beath, Community Development Director City of Hanford (559-585-2583).

Jim Beath TKS

Mr. Jim Beath,
Community Development Director, City of Hanford

Notice of Completion and Environmental Document Transmittal Form

Mail to: State Clearinghouse, 1400 Tenth Street, Sacramento, CA 95814 — 916/445-0613

See NOTE below
SCH# 2002021036

1 **Project Title** City of Hanford General Plan Update 2002
2 Lead Agency City of Hanford
2 a Street Address 317 North Douty Street
2 c County Kings
2 d Zip 93230
3 Contact Person Mr. Jim Beath
3 b City Hanford
3 c Phone (559) 582-2583

Project Location
4 County Kings
4 a City/Community City of Hanford
4 b Assessor's Parcel No.
4 c Section Twp Range
5 a Cross Streets
5 b For Rural, Nearest Community N/A
6 Within 2 miles: a State Hwy. 198 &43
b Airports Hanford Airport
c Railways BN&SF, SJV
d Waterways

7 **Document Type**

CEQA:
01 [ ] NOP
02 [ ] Early Cons
03 [ ] Neg Dec
04 [X] Draft EIR
05 [ ] Supplement/Subsequent EIR (prior SCH#)
06 [ ] NOE
07 [ ] NOC
08 [ ] NOD

NEPA:
09 [ ] NOI
10 [ ] FONSI
11 [ ] Draft EIS
12 [ ] EA

OTHER:
13 [ ] Joint Document
14 [ ] Final Document
15 [ ] Other

8 **Local Action Type**
01 [X] General Plan Update
02 [ ] New Element
03 [ ] General Plan Amendment
04 [ ] Master Plan
05 [ ] Annexation
06 [ ] Specific Plan
07 [ ] Community Plan
08 [ ] Redevelopment
09 [X] Rezone
10 [ ] Land Division (subdivision Parcel Map, Tract Map, etc.)
11 [ ] Use Permit
12 [ ] Waste Management Plan
13 [ ] Cancel Ag Preserve
14 [ ] Other

9 **Development Type**
01 [ ] Residential *Units* *Acres*
02 [ ] Office *Sq.ft.* *Acres*
03 [ ] Shopping/Commercial *Sq.ft.* *Acres* *Employees*
04 [ ] Industrial *Sq.ft.* *Acres* *Employees*
[ ] Water Facilities *MGD*
[ ] Transportation *Type*
07 [ ] Mining *Mineral*
08 [ ] Power *Type* *Watts*
09 [ ] Waste Treatment *Typ*
10 [ ] OCS Related
11 [X] Other General Plan Update

10 **Total Acres**
11 **Total Jobs Created**

12 **Project Issues Discussed in Document**
01 [X] Aesthetic/Visual
02 [X] Agricultural Land
03 [X] Air Quality
04 [X] Archeological/Historical
05 [ ] Coastal Zone
06 [ ] Economic
07 [X] Fire Hazard
08 [X] Flooding/Drainage
09 [X] Geologic/Seismic
10 [X] Jobs/Housing Balance
11 [X] Minerals
12 [X] Noise
13 [X] Public Services
14 [X] Schools
15 [ ] Septic Systems
16 [X] Sewer Capacity
17 [ ] Social
18 [X] Soil Erosion
19 [X] Solid Waste
20 [X] Toxic/Hazardous
21 [X] Traffic/Circulation
22 [X] Vegetation
23 [X] Water Quality
24 [X] Water Supply
25 [X] Wetland/Riparian
26 [X] Wildlife
27 [X] Growth Inducing
28 [X] Incompatible Land Use
29 [X] Cumulative Effects
30 [ ] Other

13 **Funding (approx.): Federal $** **State $** **Total $**

14 **Present Land Use and Zoning**
Not applicable, General Plan Update.

15 **Project Description**
Update of General Plan (except Housing Element) elements including land use, circulation, hazards management, open space, conservation and recreation and public facilities and services.

16 **Signature of Lead Agency Representative** Jim Beath **Date:** 4-2-02

Note: Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. from a Notice of Preparation or previous draft document) please fill it in.

Form Revised 4/86 - Replaces CA 189

Mark Distribution of Reverse.

Reviewing Agencies

- [ ] Resources Agency
- [ ] Boating/Waterways
- [S] Conservation
- [S] Fish and Game
- [ ] Forestry
- [ ] Colorado River Board
- [S] Dept. Water Resources
- [S] Reclamation
- [ ] Parks and Recreation
- [ ] Office of Historic Preservation
- [S] Native American Heritage Commission
- [ ] S.F. Bay Cons. and Dev't. Commission
- [ ] Coastal Commission
- [ ] Energy Commission
- [ ] State Lands Commission
- [S] Air Resources Board (SJVAPCD)
- [ ] Solid Waste Management Board
- [ ] SWRCB: Sacramento
- [S] RWQCB: Region # 5F
- [ ] Water Rights
- [ ] Water Quality
- [S] Caltrans District 6
- [ ] Dept. of Transportation Planning
- [ ] Aeronautics
- [S] California Highway Patrol
- [ ] Housing and Community Dev't.
- [ ] Statewide Health Planning
- [ ] Health
- [ ] Food and Agriculture
- [ ] Public Utilities Commission
- [ ] Public Works
- [ ] Corrections
- [ ] General Services
- [ ] OLA
- [ ] Santa Monica Mountains
- [ ] TPRA
- [ ] OPR - OLGA
- [ ] OPR — Coastal
- [ ] Bureau of Land Management
- [ ] Forest Service
- [ ] Other Please refer to attached Distribution List
- [ ] Other _____

For SCH Use Only

Date Received at CSH _____ Catalog Number _____

Date Review Started _____ Applicant _____

Date to Agencies _____ Consultant _____

Date to SCH _____ Contact _____ Phone _____

Clearance Date _____ Address _____

Notes: _____

CITY OF HANFORD
PUBLIC NOTICE OF AVAILIBILITY OF A DRAFT ENVIRONMENTAL IMPACT REPORT

(Public Resources Code Section 21092 and 21092.3, and
California Code of Regulation, Title 14, Sections 15087, 15102 and 15372)

The City of Hanford has completed, independently reviewed and analyzed the Draft Environmental Impact Report for the following project:

Project Title:

City of Hanford General Plan Update 2002.

Project Description/Location:

Update of the City of Hanford General Plan (except Housing Element), elements including land use, circulation, hazards management, open space, conservation and recreation, and public facilities and services. The General Plan Planning Area will remain identical to the current General Plan (1994) of approximately 18,900 acres, except for the addition of approximately 125 acres east of Highway 43 along Lacey Boulevard. Land Use Map amendments are considered minor and do not substantially increase overall density or intensity of development in the Planning Area. Land Use Map changes also show new locations of Planned Office, Planned Highway Development, 10th Avenue Mixed Commercial, Grangeville Boulevard Office Residential and modifications to the underlying land use on the eastside of the City, as well as, locations of existing and planned school facilities. The proposed Land Use Map should be consulted for small changes in land use. Policy amendments address Planned Commercial, Planned Office, 10th Avenue, Grangeville Office use, Office/Residential conversion of historical structures (residential in the Douty, Irwin and Redington area, Planned Highway Development (Highway 43 and Lacey Boulevard) and the City intends to process an amendment to the City's Zoning Map to reflect the changes in the General Plan Land Use Map as approved by the City Council. Amendment to the Zoning Map will be considered as a subsequent action to adoption of the General Plan and is addressed in the General Plan Update Draft Environmental Impact Report.

A copy of the Draft Environmental Impact Report may be reviewed and/or obtained at the following address:

City of Hanford
Community Development Department
317 North Douty Street
Hanford, CA 93230

Any written comments pertaining to this document must be received at the above stated address no later than May 20, 2002 (5:00 p.m.). Facsimiles will not be accepted.

Further information may be obtained by contacting Mr. Jim Beath, Community Development Director at Hanford City Hall (559-585-2583).

Jim Beath gs

Mr. Jim Beath, Community Development Director, City of Hanford

AFFIDAVIT OF FILING AND POSTING

I declare that on the date stamped below, I received and posted this notice as required by California Public Resources Code Section 21092.3. Said notice will remain posted for thirty (30) days from the filing date.

_____

Signature:

_____

Date:

DATE: April 3, 2002

City of Hanford Community Development Department

NOTICE OF AVAILABILITY OF A DRAFT ENVIRONMENTAL IMPACT REPORT

A Draft Environmental Impact Report for the 2002 General Plan Update Project has been prepared for the project in accordance with Section 15080 of the California Environmental Quality Act. The mandatory forty-five (45) day public review period will commence on April 3, 2002 and end on May 20, 2002. All comments relating to the Draft Environmental Impact Report must be submitted to the address listed below by not later than May 20, 2002 (5:00 p.m.). Copies of the Draft Environmental Impact Report may be reviewed at Hanford City Hall, Planning Department, 317 North Douty Street, Hanford, CA 93230, Monday through Friday (8:00 a.m. to 5:00 p.m.).

The Draft Environmental Impact Report (State Clearinghouse Number 2002021036) has been prepared for the City of Hanford General Plan Update 2002. Update of the City of Hanford General Plan (except Housing Element), elements including land use, circulation, hazards management, open space, conservation and recreation, and public facilities and services. The General Plan Planning Area will remain identical to the current General Plan (1994) of approximately 18,900 acres, except for the addition of approximately 125 acres east of Highway 43 along Lacey Boulevard. Land Use Map amendments are considered minor and do not substantially increase overall density or intensity of development in the Planning Area. Land Use Map changes also show new locations of Planned Office, Planned Highway Development, 10th Avenue Mixed Commercial, Grangeville Boulevard Office Residential and modifications to the underlying land use on the eastside of the City, as well as, locations of existing and planned school facilities. The proposed Land Use Map should be consulted for small changes in land use. Policy amendments address Planned Commercial, Planned Office, 10th Avenue, Grangeville Office use, Office/Residential conversion of historical structures (residential in the Douty, Irwin and Redington area, Planned Highway Development (Highway 43 and Lacey Boulevard) and the City intends to process an amendment to the City's Zoning Map to reflect the changes in the General Plan Land Use Map as approved by the City Council. Amendment to the Zoning Map will be considered as a subsequent action to adoption of the General Plan and is addressed in the General Plan Update Draft Environmental Impact Report.

The City of Hanford Planning Commission will conduct a noticed and scheduled public hearing on June 11, 2002 on the General Plan Update, Draft Environmental Impact Report and proposed Zoning Map Amendment and consider a recommendation to the City Council. The City Council on June 18, 2002 will conduct a noticed and scheduled public hearing to consider the adoption of the General Plan Update, certification of the Environmental Impact Report and approval of Zoning Map Amendments.. A public hearing notice will be published in the May 27, 2002 edition of the Hanford Sentinel.

If you challenge the above matter in court, you may be limited to raising only those issues you or someone else raised at the Public Hearings conducted by the Planning Commission and City Council, or in written correspondence delivered to the City of Hanford Community Development Department at the address listed above at, or prior to, the Public Hearings or any comments received during the public review period of the Draft Environmental Impact Report.

Mr. Jim Beath,
Community Development Director, City of Hanford

To be published in the April ??, 2002 edition of the Hanford Sentinel
Please furnish "Proof of Publication".

DATE/TIME Posted 4/3/02 VERIFIED BY: Mr. Jim Beath, Planning Director

CITY OF HANFORD
GENERAL PLAN UPDATE 2002
DISTRIBUTION LIST

Board of Supervisor/Clerk
1400 W. Lacey Blvd,.
Hanford, CA 93230

Kings Co. Assoc. of Govt.
Attn: Terry King
1400 W. Lacey Blvd.
Hanford, CA 93230

Kings Waste and Recycling Authority
7803 Hanford Armona Rd.
Hanford, CA 93230

Kings Area Rural Transit
Attn: Ron Hughes
1400 W. Lacey Blvd
Hanford, CA 93230

Kings Co. Library
401 N. Douty St.
Hanford, CA 93230

Dennis Bray, Ag Commissioner
Kings Co. Ag. Dept.
680 N. Campus Dr.
Hanford, CA 93230

Collar, Carol (UC Extension)
1400 W. Lacey Blvd.
Hanford, CA 93230

Fire Chief
Kings County Fire Dept.
280 Campus Dr.
Hanford, CA 93230

NRCS/USDA
Attn: Vince Moreno
680 Campus Dr. Ste. C
Hanford, CA 93230

Historic Society
Hanford Carnegie Museum
108 E. 8th St.
Hanford, CA 93230

NRCS, State Air Quality Control, John Beyer
4974 E. Clinton, Ste 114
Fresno CA 93727

Larry Norris
NRCS.
3530 W. Orchard Court
Visalia, CA 93277

Harry Verheul, Director
Kings County - Public Works
1400 W. Lacey Blvd., Bldg. 6
Hanford, Ca 93230

Loretta A. Tucker R.E.H.S.
Kings County – Dept. of Public Health
Div. of Environmental Health Services
330 Campus Dr.
Hanford, Ca 93230

Armona Community Services
10956 14th Ave.
Armona, CA 93230

Bill Zumwalt, Director
Kings Co. Planning & Development
1400 W. Lacey Blvd., Bldg. 6
Hanford, CA 93230

CalTrans, Dist. 6, Advanced Planning
P.O. Box 12616
Fresno, CA 93778

Moses Stites
CalTrans
P.O. Box 12616
Fresno, CA 93778

City of Corcoran, Jeri Grant
1033 Chittenden St
Corcoran, CA 93212

City of Lemoore, Ron Hoggard
119 Fox Street
Lemoore, CA 93245

Donna Daniels
CA Dept. of Fish and Game
1234 E. Shaw Ave.
Fresno, CA 93710

Kings Co. EDC, Jay Salyer
120 N. Irwin St
Hanford, CA 93230

Kings Mosquito Abatement Dist
Attn: Gary Byde
10871 Bonneyview Ln.
Hanford CA 93230

Lemoore NAS, PW Officer (Code 50)
700 Avenger Ave.
Lemoore CA 93246-5001

Native American Heritage Com.
915 Capitol Mall, Rm. 364
Sacramento CA 95814

RWQCB, Dist 5
3614 E. Ashlan Ave.
Fresno CA 93726-3533

SJVAPCD Southern Region Office
2700 M Street, Suite 275
Bakersfield CA 93301-2370

SJVAPCD
Attn: Dave Mitchell
1990 E. Gettysburg Ave.
Fresno, CA 93721

California State Clearinghouse
1400 Tenth St., Rm. 222
Sacramento, CA 95814

U.S. Dept. of the Interior
Fish & Wild Life Service
2800 Cottage Way Room W 2605
Sacramento, CA 95825

State of California
Dept. of Conservation
801 K St.
Sacramento, CA 95814-3528

Kamiran S. Badrkan, Ph.D.
Superintendent/President
C.O.S.
915 S. Mooney Blvd.
Visalia, CA 93277

Kings River Water Conservation Dist.
200 N. Campus Dr.
Hanford, CA 93230

Kings Co. Fair
Attn: Beverly Baker, Manager
810 S. 10th Ave.
Hanford, CA 93230

Peoples Ditch Company
Attn: Dale Kuntz
1716 N. 11th Ave.
Hanford, CA 93230

Hanford Cemetery Dist.
10500 10th Ave.
Hanford, CA 93230

Last Chance Water Ditch Company
1716 N. 11th Ave.
Hanford, CA 93230

Lakeside Irrigation Water Dist.
Attn: Ken Cartwright
9304 Houston Ave.
Hanford, CA 93230

Kings Co. Water Dist.
Attn: Don Miles
200 Campus Dr.
Hanford, CA 93230

John Shelton, CEQA Coordinator
CA Dept. of Water Resources
3374 E. Shields, Rm. A7
Fresno, CA 93627

William Fishbough, Superintendent
Armona Union Elementary
11115 C St.
Armona, CA 93202

Jamie Perkins,
Superintendent/Principal
Kings River-Hardwick Union
Elementary
10300 Excelsior Ave.
Hanford, CA 93230

John A. Webster, Superintendent
Pioneer Union Elementary
8810 14th Ave.
Hanford, CA 93230

Chuck Draxler
Kings Co. Farm Bureau
870 W. Greenfield Ave.
Hanford, CA 93230

Dean I. Crechrlou, Superintendent
Armona Union Elementary
9895 7th Ave.
Hanford, CA 93230-9304

Ron Madruga, Superintendent
Lakeside Union Elementary
9100 Jersey Ave.
Hanford, CA 93230

Cindy Lee
Pac Bell Environ. Review
1250 E. Ashlan Ave
Fresno, CA 93704

Kevin Arellano, Planner
So. Cal. Edison
2425 S. Blackstone
Tulare, CA 93274

Cliff Ronk, BIA
Centex Homes
1840 S. Central Ave.
Visalia, CA 93277

Craig Scharton
Hanford Main Street
109 W. 7th St.
Hanford, CA 93230

Hanford Chamber of Commerce
Attn: Jerry Frazier
200 Santa Fe St.
Hanford, CA 93230

Building Industry Association
C/o Bob Keenan
315 Oak St.
Visalia, CA 93291

Joe Camera
Hanford Elementary School Dist.
P.O. Box 1067
Hanford, CA 93230

Pete Faconti, Superintendent
Hanford Joint Union High School Dist.
120 E. Grangeville Blvd.
Hanford, CA 93230

Larry Spikes, County Admin. Officer
Kings County
1400 W. Lacey Blvd.
Hanford, CA 93230

County Clerk
Kings County
1400 W. Lacey Blvd.
Hanford, CA 93230

Ginnis, Kari - Fresno Bee
525 W. Main St., Suite E
Visalia CA 93291-6149

Hanford Sentinel
PO Box 9
Hanford CA 93232

List of Tables

List of Figures

1. INTRODUCTION

1.1. Purpose

The California Environmental Quality Act (CEQA) requires that all state and local government agencies consider the environmental consequences of projects over which they have discretionary authority. The Environmental Impact Report EIR is intended to provide decision-makers and the public with information concerning the environmental effects of a proposed project, to indicate measures to reduce or avoid the possible environmental damage, and to identify alternatives to the project. The EIR must also disclose significant environmental impacts that cannot be avoided; growth-inducing impacts; effects not found to be significant; and significant cumulative impacts of all past, present and reasonably anticipated future projects.

State Law specifies the basic contents of the General Plan. However, state law permits each jurisdiction to use any format deemed appropriate or convenient. General Plans are traditionally organized into collection of required and optional elements, or subject categories. These elements contain a policy document and has elected to include supporting environmental documentation for the General Plan in the EIR and Technical Appendices.

The City of Hanford is also amending the Zoning Ordinance and Zone Map to bring the Zoning Ordinance and Map into consistency with the general plan. In addition, the City's amending its Zoning Ordinance text to address technical changes in zone classifications, definitions and procedures.

1.2. Program Environmental Impact Report (Volume I)

Volume I consists of the General Plan EIR. The Hanford General Plan EIR is intended to serve as a program level EIR. This approach is appropriate for evaluating a series of actions that can be characterized as one large project and can be related either (1) geographically; (2) as logical parts in the chain of contemplated actions; (3) in connection with the issuance of rules, regulations, plans or other general criteria to govern the conduct of a continuing program; or (4) as individual activities carried out under the same statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways (CEQA Guidelines, Section 15168).

A Program EIR has the following advantages: provides an occasion for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action; it ensures consideration of cumulative impacts that might be slighted in a case-by-case analysis; it avoids duplicative reconsideration of basic policy considerations; it allows the lead agency to consider broad policy alternatives and program-wide mitigation measures at an early time where the agency has greater flexibility to deal with basic problems of cumulative impacts; and, it allows reduction in paperwork (Guidelines Section, Section 15168).

Subsequent development projects proposed within the City must be reviewed in the context of this Program EIR to determine if additional environmental documentation is required. If the subsequent project would have environmental effects not addressed in the Program EIR, additional environmental review would be required. Where no new effects and no new mitigation measures are involved, the subsequent project may be approved without additional environmental documentation. Where an EIR is required of a subsequent project, the EIR should implement the applicable mitigation measures developed in the Program EIR, and focus its analysis on site-specific issues not previously addressed.

1.3. Technical Appendices to the DEIR (Volume II)

Volume II contains studies referenced in Volume I. These are technical studies and maybe requested as background information to the DEIR.

1.4. General Plan (Attached)

The "Draft" General Plan is attached to the DEIR for reference purposes. Within the DEIR there are many references to General Plan Objectives, Policies and Programs as mitigation measures.

The Hanford General Plan functions as a guide for local government decision-makers, citizens and the development community with respect to land use and development. The General Plan must address the following seven elements or 'chapters"; land use, housing, circulation, conservation of natural resources, preservation of open space, the noise environment, and the protection of public safety. While inclusion of each of the seven elements is required, the City may format the General Plan in any order, so long as it complies with all requirements governing content and adoption procedures. The City of Hanford has elected to address the following elements: Land Use, Circulation, Hazards Element, Open Space and Conservation, Public Facilities, and Housing. The Housing Element will be updated later in 2003 when the 2000 Census data is fully available.

The State requires local jurisdictions to adopt General Plans based on the belief that the future growth of California is largely determined by local land use decisions and related actions. The General Plan addresses land within the City's boundaries and certain areas outside the boundaries that have a relation to a City's Sphere of Influence. The Hanford General Plan Project Area consists of the City, Sphere of Influence, and Planning Area.

1.5. Zoning Ordinance

The Hanford Zoning Ordinance will be amended to reflect modifications in the proposed General Plan. Essentially sections of the Zoning Ordinance will be added or amended to reflect new titles of land uses or to add new sections such as "Planned Office" and "Planned Highway Development".

The City intends to amend the Zoning Map immediately following action to adopt the General Plan Update. Zoning Map amendments will bring the Zoning Map into compliance with the General Plan Land Use Map.

1.6. Authority

This EIR has been prepared to satisfy the CEQA (Public Resources Code Section 21000 et. seq.) and the state CEQA Guidelines Title 14 of the California Administrative Code Section 15000 et. seq.) for the Hanford General Plan referred to as the project

1.7. Intended Use of the EIR

The City of Hanford, as the lead agency for this project, will use this EIR in consideration of the proposed General Plan and Zoning Ordinance Amendments. This document will provide environmental information for several other agencies affected by the project, or which are likely to have an interest in the project. Various state and federal agencies exercise control over certain aspects of the project area. The various public, private and political agencies and jurisdictions with a particular interest in the proposed project include, but are not limited to, the following:

Federal Agencies

United States Fish and Wildlife Service (USFWS) - Responsible for conserving and protecting wild birds, endangered species and their habitat for the benefit of the public at large. This agency will act *as* a Trustee.

United States Department of Agriculture - Responsible for conservation and monitoring of agriculture lands.

U.S. Army Corps of Engineers - Empowered to regulate the protection and conservation of all United States waters of the U.S., which includes navigable rivers and wetlands.

State Agencies

California Department of Fish and Game (CDFG) - Responsible for the protection, conservation, propagation and enhancement of California's Wildlife Resources. This Department enforces laws and regulations, and issues licenses relative to and cooperates with local agencies in developing projects. This agency will act as a Trustee.

California Regional Water Quality Control Board (CRWQCB) - Responsible for evaluating appropriate uses of water and for issuing National Pollution Discharge Elimination System (NPES) permits and waste discharge requirements.

California Reclamation Board (CRB) - Responsible for delineation of flooding and regulation of encroachments into designated floodways.

California Department of Transportation (Caltrans) - Responsible for approval of roadway improvements along all state highways within California. Also responsible for design and construction or future improvements to state highways.

California Environmental Protection Agency - This agency is the primary state agency concerned with degradation of the environment, and how it effects human physical and mental health. It is responsible for the examination and prevention of pollution of sources of public water supplies; establishment of ambient standards of air quality; monitoring of environmental pollution, regulation of the quality of water supplies and sewage disposal systems; regulation of safety of foods, drugs and cosmetics; surveillance of vector-borne disease conditions; regulation and control radioactive materials; regulations of hospitals; and providing certain laboratory support to other state agencies.

California Department of Agriculture - This agency establishes legislation and regulations in the California Food and Agriculture Code, which are enforced through the Kings County Department of Agriculture.

California Department of Water Resources - Responsible for the planning of future water needs through the California Water Project which builds, operates, and maintains water facilities (e.g. dams and flood control projects) in California.

Regional / local Agencies

City of Hanford - Responsible for land use control, and the provision of urban services throughout the project site. The City will act as the Lead Agency for the proposed project.

Kings County - This jurisdiction will act as a Responsible Agency for the proposed project as Hanford is located within Kings County. In addition, the General Plan recommends Annexation of areas currently under the County's jurisdiction.

San Joaquin Valley Air Pollution Control District (SJVAPCD) - Serves as the air quality control district and has the responsibility for the implementation of the California Clean Air Act. This agency's authority includes counties throughout the San Joaquin Valley.

Kings County Department of Agriculture - Enforces the California Department of Agriculture legislation and regulations as they relate to the California Food and Agriculture Code for their jurisdiction, (e.g. fruit inspection, pesticide regulations and predatory animal control). This agency also maintains an Agricultural Crop and Livestock Report on an annual basis.

Hanford Elementary School District - The primary provider of elementary and intermediate public education to children in a portion of the City of Hanford and outlying territory within the General Plan boundaries.

Hanford Joint Union High School District - The primary provider of high school education for the City of Hanford and outlying territory within the General Plan boundaries.

Kings River-Hardwick Union Elementary - The Primary provider of elementary, and intermediate public education to children in the northern portion of the City of Hanford and outlying territory within the General Plan boundaries.

Pioneer Union Elementary School District - The primary provider of elementary and intermediate public education to children in the western portion of the City of Hanford and outlying territory within the General Plan boundaries.

Lakeside Union Elementary School District - The primary provider of elementary and intermediate public education within the southern portion of the City of Hanford and outlying territory within the General Plan boundaries.

Kit Carson Union Elementary School District - The primary provider of elementary and intermediate public education within the eastern portion of the City of Hanford and outlying territory within to General Plan boundaries.

Armona Union Elementary School District - The primary provider of elementary and intermediate public education to children in the southwestern portion of the City of Hanford and outlying territory within the General Plan boundaries.

Armona Community Services District - This jurisdiction is an Interested Agency for the proposal project as its boundaries are proximate to the Hanford General Plan boundary.

Kings Area Rural Transit - Provides transit services to the City of Hanford and surrounding areas through established routes and demand response programs.

Kings County Water District - Provides irrigation water resources to agricultural interests within the Hanford General Plan Boundaries.

Kings County Regional Planning Agency KCRPA) - This agency is responsible for transportation planning services in Kings County cities. In addition, the KCRPA oversees the Kings County Area Public Transit Agency.

King County Local Agency Formation Commission (LAFCO) - This agency is responsible for processing applications for the following in Kings County: land annexation, city sphere of influence changes, and the incorporation of cities. The Hanford General Plan Program would result in an expansion of the City's existing Sphere of Influence boundary. Therefore, a Sphere of Influence boundary change would be requested from LAFCO. The analysis of environmental impacts in this document also applies to impacts associated with the expansion of the Sphere of Influence boundary. LAFCO is a Responsible Agency for this project.

Kings Waste Recycling Authority (KWRA) - This multi-jurisdictional agency is responsible for ownership and operation of waste disposal facilities in Kings County and takes a lead role in the implementation of the Source Reduction and Recycling in the County. As such KWRA is a responsible agency.

Peoples Ditch Company - Is a private company, which owns and operates irrigation water transmission facilities within the General Plan Boundaries and as such it is an interested party. Peoples' Ditch facilities by agreement with the City carry storm water runoff and facilities may have to be relocated or protected to accommodate development.

Lakeside Irrigation Water District - Owns and operates irrigation water facilities and provides irrigation water from Kaweah River to agricultural lands within the General Plan Boundary. As such this District is a responsible agency.

Last Chance Water Ditch Company - Owns and operates irrigation water facilities and provides irrigation water from the Kings River to Agriculture land within the General Plan boundary. As such it is an interested party.

1.8. Background and Scope

This EIR evaluates the potential individual and cumulative environmental effects associated with implementation of the policies and programs of the Hanford General Plan. Direct Primary effects of the project, as well as any potential indirect/secondary impacts that occur through build out, are evaluated including Zoning Ordinance and Zoning Map amendments. The EIR serves as the framework for review of future development review and planning efforts, and identifies where additional environmental analysis may be required.

The EIR provides recommendations, in the form of mitigation measures, to minimize potentially significant effects, and describes the consequences of unavoidable environmental impacts. Alternative project options have been evaluated to provide a comparative analysis of the potential environmental effects of these alternatives, relative to those associated with the proposed project.

The scope of the EIR was determined through the noticing process. The Environmental Checklist which accompanied the Notice of Preparation (NOP) identified potential impacts resulting from implementation of the proposed General Plan. Comments on the NOP received from responsible, trustee and interested agencies, resulted in refinements to the EIR scope.

The Environmental issues to be addressed in this document include:

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils

- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation and Traffic
- Utilities and Service Systems

The following mandatory components of an EIR are also addressed:

- Cumulative Impacts.
- The relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity.
- Any significant, unavoidable and/or irreversible environmental changes which would be involved in the proposed action should it be implemented.
- The growth-inducing impacts of the proposed project.
- Evaluation of project alternatives including the no-project alternative, and other alternatives that are deemed potentially feasible.

1.9. Document Organization

Sections 1 and 2 of this document provide an overview of the scope, use and approach of this Draft EIR, and an Executive Summary of the environmental analysis.

Section 3 includes a detailed project description of the General Plan goals, policies and actions.

Section 4 is organized by issue area and each area includes a description of: the environmental setting relative to that issue; environmental effects of the proposed project: mitigation measures; and the determination of significance after mitigation. Mitigation measures that are incorporated into the General Plan in the form of objective policies and programs are described in the environmental effect subsection and additional measures which may be required to mitigate project impacts are recommend.

Impacts and mitigation measures are generally organized under the issue topics. However, an impact or mitigation measures location within the document should not restrict it from being considered under another issue topic, even though omitted from that section. Many of the impacts relating to General Plan are multi-faceted. Similarly, the objective policies and programs, which serve as mitigation measures and additional mitigations recommended, may accomplish several purposes and mitigate more than one impact. It is important that decision-makers be cognizant of this fact in their consideration and use of this document. If mitigation measures are altered, the affect

this action would have on other issues should be evaluated. Cumulative impacts are also discussed as part of this chapter.

Section 5 is a discussion of the alternatives to the proposed project and related impacts and evaluation. Sections 6 through 9 addresses the remainder of CEQA mandated issue areas (e.g., unavoidable impacts, short-term versus long-term uses). Section 10 presents references, and Section 11 contains the NOP and responses.

2. EXECUTIVE SUMMARY

2.2. Summary Table

S = Significant
SU = Significant Unavoidable
PS = Potential Significant
LS = Less than Significant

Environmental Impacts	Level of Significance	Mitigation Measure(s)	Level of Significance after Mitigation
Aesthetics			
Implementation of the General Plan would result in intensification of urban development in the Planning Area. In particular, intensification of land uses now devoted to agriculture. Build-out of the General Plan will alter the rural/agricultural character of the undeveloped portion of the Planning Area. Although the General Plan requires trees and landscaping along major roadways, the appearance of the undeveloped portion of the Planning Area will be substantially altered. It is anticipated that older neighborhoods may transition into residential/office uses. The character of the neighborhood could be adversely effected if preservation efforts are not attempted.	LS	General Plan Policies requires landscaping of major roadways, lowering density toward the edge of the Planning Area. General Plan Policies and programs guide conversion of older neighborhoods.	LS
Agricultural Resources			
The General Plan Update adds only 125 acres to the existing Planning Area adopted in 1994. Full build-out of the General Plan would result in the eventual urban conversion of as much as 6,551 acres of Prime and farmland of statewide importance. Total farmland consumed by 2025 is estimated at 5,518 acres (including a 50% residential market reserve) and represents approximately 0.9% of cultivated land in Kings County. At full-build-out,	SU	General Plan Objectives, Policies and Programs aid in minimizing the impact on premature conversion of farmland and conflicts between urban and agricultural uses, but not at a level of non-significance.	SU

Environmental Impacts	Level of Significance	Mitigation Measure(s)	Level of Significance after Mitigation
conversion to urban uses is estimated that 1.7% of cultivated land in Kings County. While the percentage is small compared to the total acreage, the cumulative impact of consuming this resource is considered an irreversibly significant unavoidable impact. A total of 3,540 acres of Williamson Act lands would be converted to land uses other than agriculture and would also result in a significant impact.			
Air Quality			
Based on air quality modeling accomplished by KCAG, forecasted emissions from transportation at 2025 build-out are within the baseline budgets established for Kings County. Individual industries are required to address air quality standards and apply the best available control technology. The City requires conformity with SJVAPCD regulations. The City is implementing Traffic Control Measures. Ridership on Kings County Transit has substantially increased since its inception. Growth in the San Joaquin Valley and Hanford will contribute to deteriorating air quality. Much of the source of the deteriorating air quality is beyond the City's control. Implementation of the General Plan will accommodate projected population growth and incremental unavoidable significant impacts.	SU	The General Plan contains Objectives, Policies, and Programs that assist in reducing the impact of growth on deteriorating air quality. The array of these actions can assist in reducing air quality impacts. The impact from growth and development remains unavoidable and significant.	SU
Biological Resources			
Almost all land within the Planning Area has been altered from its natural state. The possibility of Listed Special Status Plant and Animal Species exists, such as the Swainsons Hawk, Valley Elderberry Lognhorn Bettle, Burrowing owl, Western Pond Turtle, and the potential habitat	LS	The General Plan Objectives, Policies and Programs provide for adequate protection of potential habitat sites in the implementation of land use entitlement approval process.	LS

Environmental Impacts	Level of Significance	Mitigation Measure(s)	Level of Significance after Mitigation
for the San Joaquin Kit Fox. Implementation of the General Plan would convert agricultural foraging habitat to urban use. This is a loss of low value potential habitat. The cumulative loss of potential habitat is considered significant. Surveys for Listed or Special Status should be performed on land that may support active habitat, such as Borrowing Owls. Each project will be reviewed at the site level to determine if a biological study is necessary.		Specific site by site mitigation may be required including avoidance and or altering construction timing and practices. Consultation with state and federal agencies may be required depending on the results of specific site studies.	
Cultural Resources			
Archaeological: Implementation of the General Plan has the potential to adversely impact undiscovered archaeological resources in the Planning Area. Because of the sloughs that once existed in the Planning Area and the subsequent agricultural disruption of the natural landform, there is a potential that undiscovered archaeological sites might be present. Construction activities typically require excavation in areas near obliterated sloughs or near slough remnants in the Planning Area. Archaeological sites may be uncovered. Federal and State agencies have adopted policies with regard to actions that must be taken if such sites are unearthed during construction processes. Historical: Transition of older neighborhoods has the potential to adversely impact existing historical resources in the Planning Area. As commercial land use expands northward from the downtown area, older predominately single-family residential dwellings may be converted into office uses.	LS	The General Plan Objectives, Policies and Programs provide for adequate protection of potential archaeological sites and historically significant structures in the implementation of land use entitlement approval process.	LS

Environmental Impacts	Level of Significance	Mitigation Measure(s)	Level of Significance after Mitigation
While not every structure is historical, they do lend to the character of the neighborhoods. Conversion activities may include introduction of signs, parking areas, and landscape elements that are often incompatible or inconsistent with historical character of the structures. Adaptive reuse of residential structures can occur without substantially altering the historic character of a neighborhood.			
Geology and Soils			
Implementation of the General Plan Land Use Plan would expose additional population to the effects of groundshaking earthquakes. The overall risk associated with earthquake hazards is adverse, but relatively low compared to other areas of the state.	LS	The General Plan Objectives, Policies and Programs provide for adherence to the seismic safety guidelines for building construction as adopted by the Uniform Building Code of the State of California.	LS
Hazards & Hazardous Materials			
Implementation of the General Plan would designate a variety of land uses in areas where past agricultural practices may have resulted in soil contamination, especially in areas where pesticide storage may have occurred. In areas where urban and agricultural operations come in contact there is a potential for pesticide spraying which may pose a potential hazard. Although there is a planned separation between industrial areas and sensitive receptors, there is a potential for health hazards during an accidental emission of hazardous materials, which may also result in the need for evacuation. Several locations have been identified with groundwater contamination issues. These	LS	The General Plan Objectives, Policies and Programs provide for adherence to the safety standards and guidelines for risk of upset due to hazards and hazardous materials during the land use entitlement process. King County, State and Federal agencies enforce regulations regarding the safe application of agricultural chemicals.	LS

Environmental Impacts	Level of Significance	Mitigation Measure(s)	Level of Significance after Mitigation
areas are currently being addressed by County and State programs. Future development must consider potential health hazards in these locations employing through site analysis. There is a potential for inundation of the City of Hanford from a failure of Pine Flat Dam. The effects of dam failure would reach Hanford in five hours. Kings County General Plan provides for the identification of evacuation routes, and the City of Hanford has an emergency response plan, which should assist in notification and evacuation efforts in the instance of a catestrophic event.			
Hydrology and Water Quality			
Water Supply: The conversion of agricultural and vacant fallow lands within the Planning Area to proposed urban uses will result in an increase in the demand for groundwater. Assuming the General Plan 2025 build out (a population of over 82,000), the forecasted water demand would be about 19,000 acre-feet per year. This new demand represents a 89% increase in the current urban water demand in the City, exclusive of significant water consuming industrial users. The water balance analysis demonstrates that the City may have to increase its efforts in groundwater recharge to add an estimated 232 acre feet per year. Drainage: Build out of the General Plan Area will require the expansion of the existing storm water drainage system. Based on a preliminary study of 2025 General Plan build-out, an	LS	The General Plan Open Space/ Conservation, and Recreation Element, and the Public Facilities Element contains Policies and Programs which mitigate impacts associated with implementation of the General Plan during the land use entitlement process and through the collection of development impact fees and charges for capital improvements.	LS

Environmental Impacts	Level of Significance	Mitigation Measure(s)	Level of Significance after Mitigation
additional 2,060 acre feet of storm drainage basin capacity will be required. Given typical design standards, approximately 132 acres of land within the General Plan Area will be necessary to accommodate stormwater needs.			
Land Use and Planning			
The Planning Area remains the same as adopted in the 1994 General Plan with the exception of an additional 125 acres at Highway 43 and Lacey Blvd. The capacity of the Planning Area to accommodate projected population is not substantially effected by the proposed land use designation changes. No land use conflicts are created by the proposed land use changes. Population projections at the 2025 General Plan build-out indicate that population may increase by about 38,665 to 82,240. It is estimated that over 14,170 additional dwelling units would be required to house this new population on approximately 2,690 acres. It is also anticipated that commercial and industrial development will also grow at an equivalent rate to the existing ratio of commercial and industrial development in the City requiring an additional 942 acres. Accompanying this demand will be additional school and educational facilities as well as parkland estimated at an additional 538 acres. It is estimated that a total of almost 4,172 additional acres (not including a 50% residential market reserve) will be converted into urban use by the year 2025.	PS	The proposed General Plan contains policies encourage the preparation of Master Plans or Area Plans for proposed annexations or major development projects in the City. These plans are required to provide details for the phasing of development and provision of infrastructure to support development. The General Plan contains substantial Policies and programs to guide the location and quality of growth in the Planning Area.	LS
Mineral Resources			
There are no mineral resources in the Planning Area. No impacts are anticipated.	LS	No mitigation measures required	LS

Environmental Impacts	Level of Significance	Mitigation Measure(s)	Level of Significance after Mitigation
Noise			
The major source of increased noise will be from vehicles traveling on existing and future transportation corridors in the Planning Area. The noise increases associated with these roadways are primarily related to the amount of new traffic which is projected to occur as the General Plan is implemented. Existing sensitive land uses adjacent to these roadways may be adversely affected by motor vehicle noise and have the potential for a significant impact. Railroad noise is another potentially significant impact, which may be mitigated by sound attenuation practices. Some existing development is currently subject to significant noise where noise attenuation features were not constructed (or required) at the time of development. Other future potential sources of increased noise are the expansion of the Hanford Airport, or if raceway activity at the Kings County Fair Grounds increases.	LS	The General Plan contains Policies and Programs intended to minimize noise impacts to sensitive receptors. Specific site noise issues are considered during the land use entitlement process.	LS
Population and Housing			
Implementation of the General Plan would result in increased population, additional dwelling units and employment opportunities. The estimated increases in population and dwelling units are within Kings County growth projections for the region, and therefore, does not represent a significant environmental impact. However, population and housing increases would have indirect impacts on traffic, noise, air quality, and agricultural land. The increase in employment is perceived as beneficial yielding	LS	No Mitigation Measures are required other than the findings of consistency with the General Plan Policies during the land use entitlement process.	LS

Environmental Impacts	Level of Significance	Mitigation Measure(s)	Level of Significance after Mitigation
a housing to jobs ratio of about 1:1 at full build-out of the General Plan.			
Public Services			
Fire Services: Growth of the City to the east or west consistent with the proposed General Plan will place more urban uses outside the acceptable response time contours for the existing fire stations. Build-out of the General Plan will require a minimum of two additional fire stations. One future station is planned at 7th Street and Campus Dr., and a second station is planned near 9th Avenue and Florinda. This is a potentially significant impact.	PS	The General Plan contains Policies and programs to ensure adequate fire services. A finding of consistency with the General Plan is required during the land use entitlement process. The City Council assigns development impact fees to provide for the expansion of personnel, acquisition of new equipment and facilities for the Fire Department.	LS
Police Services: Growth of the City to the east or west consistent with the proposed General Plan will require additional police officers to maintain the desired ratio of 1.1 officers per 1,000 population. In addition to the personnel, new equipment will have to be added, as well as potentially more facility space for police operations. This is a potentially significant impact.	PS	The General Plan contains Policies and programs to ensure adequate police services. A finding of consistency with the General Plan is required during the land use entitlement process. The City Council assigns development impact fees to provide for the expansion of personnel, acquisition of new equipment and facilities for the Police Department.	LS
Schools: Build-out of the General Plan will have an impact on all school districts within the Planning Area. The General Plan indicates that growth is likely in the short-term on the west side of the Planning Area until wastewater collection systems can be constructed on the east side of the Planning Area. It is estimated that planned growth	PS	The City will continue to work with local School Districts to comply with state law that requires that school facility impact fees are collected by the school districts prior to issuing building permits.	LS

Environmental Impacts	Level of Significance	Mitigation Measure(s)	Level of Significance after Mitigation
will generate 11,477 new students in the City by 2025 and potentially 13 new elementary schools, 3 middle schools and two new high schools. The short-term impacts will substantially effect the School Districts serving the westside of the Planning Area. Long-term planned growth will continue to effect all school districts serving the Planning Area.			
Recreation			
Build out of the General Plan would cause an increase in population and the demand for additional recreation and open space. It is estimated that an additional 58 acres of neighborhood and 77 acres of community parkland will be required to serve the 2025 build-out population within the Planning Area. The size and location of the parks will also depend on timing of development and siting of other City or school facilities if joint facilities are developed.	LS	The General Plan contains Policies and Programs for park development and open space requirements. Consistency with the General Plan is required during the land use entitlement process. The City Council is responsible for the City budgets and assigning development impact fees to provide for the expansion of park and recreation facilities.	LS
Transportation/Circulation			
Build-out of the General Plan will increase traffic in the Planning Area and on other major transportation facilities serving the Planning Area. Based on traffic modeling in future conditions (KCAG) major arterial and collector streets in the Planning Area are forecasted to receive a substantial increase in traffic. The street system will require improvement to accommodate such growth and new streets will be constructed to handle the forecasted traffic demand. System improvements including widening and traffic signalization are also required. Coordination with Caltrans is necessary for improvements to	LS	The General Plan contains substantial Objectives, Policies, and Programs focused on providing adequate transportation within the Planning Area avoiding significant impacts relating to Transportation and Circulation. Newly developing areas and large projects are encouraged to undertake Master Planning to address not only circulation and connectivity, but land use and service delivery issues as well. Projects may be	LS

Environmental Impacts	Level of Significance	Mitigation Measure(s)	Level of Significance after Mitigation
Highways 198 and 43. Planned improvements shown in the EIR would continue to maintain the City's desired level-of-service. The exceptions noted in the traffic analysis were major streets planned for new development on the eastside of the City. As actual design proceeds, additional decisions will have to be made on the location and alignment of those streets. The lower level of service on 7th Street in the downtown is acceptable for commercial purposes. 10th Avenue between Grangeville and Lacey may require adjustments in lane configurations to meet forecasted traffic and maintain an acceptable level of service. The actual traffic demand will determine if lane adjustments are required, but the planned right of way is sufficient to meet forecasted demand. Greenfield from Lacey to 12th Avenue is forecasted to operate below an acceptable level of service. Depending on the actual amount of traffic using this street segment, adjustment to the number of lanes and on-street parking may be required. Increased demand on public transit along with expanding pedestrian and bicycle facilities is expected as growth in the City occurs.		required on a case by case basis to analyze and mitigate site specific traffic impacts. The City has adopted and implemented Traffic Mitigation Fees collected from all new development to contribute their fair share to addressing the cost of traffic mitigation projects on major facilities. These facilities include City streets and State Highways.	
Utilities and Service Systems			
Water: The conversion of agricultural and vacant fallow lands within the Planning Area to residential, commercial, and industrial land uses will result in an increase in the demand for groundwater (see Hydrology). It is estimated that approximately 8,955 acre feet of additional groundwater will be needed to accommodate forecasted growth. This growth	LS	The General Plan contains Policies and Programs requiring the provision of adequate water service for all development within the City. New development may be required to construct major facilities if existing facilities are	LS

Environmental Impacts	Level of Significance	Mitigation Measure(s)	Level of Significance after Mitigation
forecasted growth. This growth will require the extension and looping of water lines and additional water treatment and storage capacity.		not adequate to meet project demands. Consistency with the General Plan is required during the land use entitlement process. The City Council is responsible for assigning development impact fees to provide for the expansion of adequate water quantity and quality.	
Wastewater: Capacity of the City's Wastewater Treatment Plant appears to be adequate for the medium-term. In the longer-term, additional or relocated disposal areas may be required along with expansion to the wastewater treatment plant. It is anticipated that the wastewater treatment facility will have to be expanded to process an estimated 10 mgd (not including any significant industrial users that may come on line). If designed and planned extensions are accomplished, there is sufficient capacity in the westside sewer system, to accommodate planned growth. Implementation of the General Plan on the eastside of the Planning Area would require extension of the sewer collection system along with incremental increases in the wastewater treatment facility capacity. Funding for this substantial capital investment is not readily available through the City. Property owner participation will be required to extend sewer services to this portion of the Planning Area.	PS	Implementation of the policies and programs contained in the proposed General Plan would adequately ensure sufficient capacity for future planned development. New development may be required to construct major facilities if existing facilities are not adequate to meet project demands. The City Council is responsible for assigning development impact fees to provide for the expansion of adequate wastewater treatment capacity.	LS
Drainage: Implementation of the General Plan would have the potential to adversely impact the storm drainage collection and disposal	PS	Implementation of the policies and programs contained in the proposed General Plan would adequately	LS

Environmental Impacts	Level of Significance	Mitigation Measure(s)	Level of Significance after Mitigation
drainage collection and disposal system and there would be insufficient capacity in the existing facilities to accommodate additional growth. Build-out of the General Plan is estimated to require the disposal of approximately 2,060 acre feet stormwater. It is estimated that approximately 132 acres of new stormwater basins will need to be constructed. This is considered a potentially significant impact.		ensure sufficient stormwater collection and disposal capacity for future planned development. New development may be required to construct major facilities if existing facilities are not adequate to meet project demands. The City Council is responsible for assigning development impact fees to provide for the expansion of adequate stormwater collection and disposal.	
Solid Waste: Full implementation of the General Plan has the potential to generate more than 30,000 tons of solid waste annually. This increase has the potential to adversely impact the solid waste collection and disposal system. Additional recycling and resource recovery programs will help reduce the amount of solid waste that goes to the disposal facility. This is considered a potentially significant impact	PS	Implementation of the policies and programs contained in the proposed General Plan would adequately ensure sufficient solid waste collection and disposal capacity for future planned development.	LS
Electricity: Expansion and intensification of land uses due to the General Plan would result in increased demand for electricity in the Planning Area. As a public utility, SCE and PG&E (south of Ione Avenue are required to provide electrical service to accommodate demand resulting from new development. Development due to the General Plan may require the expansion of SCE and PG&E facilities within and outside the Planning Area boundary.	LS	Site specific environmental reviews required for large scale projects will evaluate incremental impacts to SCE facilities and the extension of service. Responsibility for these studies is the developer's. On-site utility easements necessary to serve proposed would be required as a condition of land use entitlements.	LS
Natural Gas:		Necessary expansion of on-site and off-site	

Environmental Impacts	Level of Significance	Mitigation Measure(s)	Level of Significance after Mitigation
Expansion and intensification of land uses due to the General Plan would result in increased demand for natural gas. Development due to the General Plan may require the expansion of SCE facilities within and outside the Planning Area resulting in a potentially significant impact.	PS	of on-site and off-site gas distribution lines and substations should be identified during development planning stages. The City of Hanford shall work with SCE to ensure development of new facilities is undertaken prior to or during construction of each development project.	LS

3. PROJECT DESCRIPTION

3.1. Environmental Setting

3.1.1. Project Location

The City of Hanford as shown on Figure 3- 1 Project Location, is located within northern Kings County, midway between Interstate 5 and State Route 99. State Routes 43 and 198 provide regional access to the City. Hanford is the largest populated City in Kings County with 44,111 residents. (Department of Finance Estimate 2001) Hanford is also the County seat, and serves as the commercial, judicial and medical center for the northern Kings County area.

The planning area considered for the Hanford General Plan Update is comprised of approximately 29.5 square miles, or roughly 18,900 acres. The Planning Area is generally bounded by Flint Avenue on the north, 13th Avenue on the west, Jackson Avenue to the south, and State Route 43 on the east.

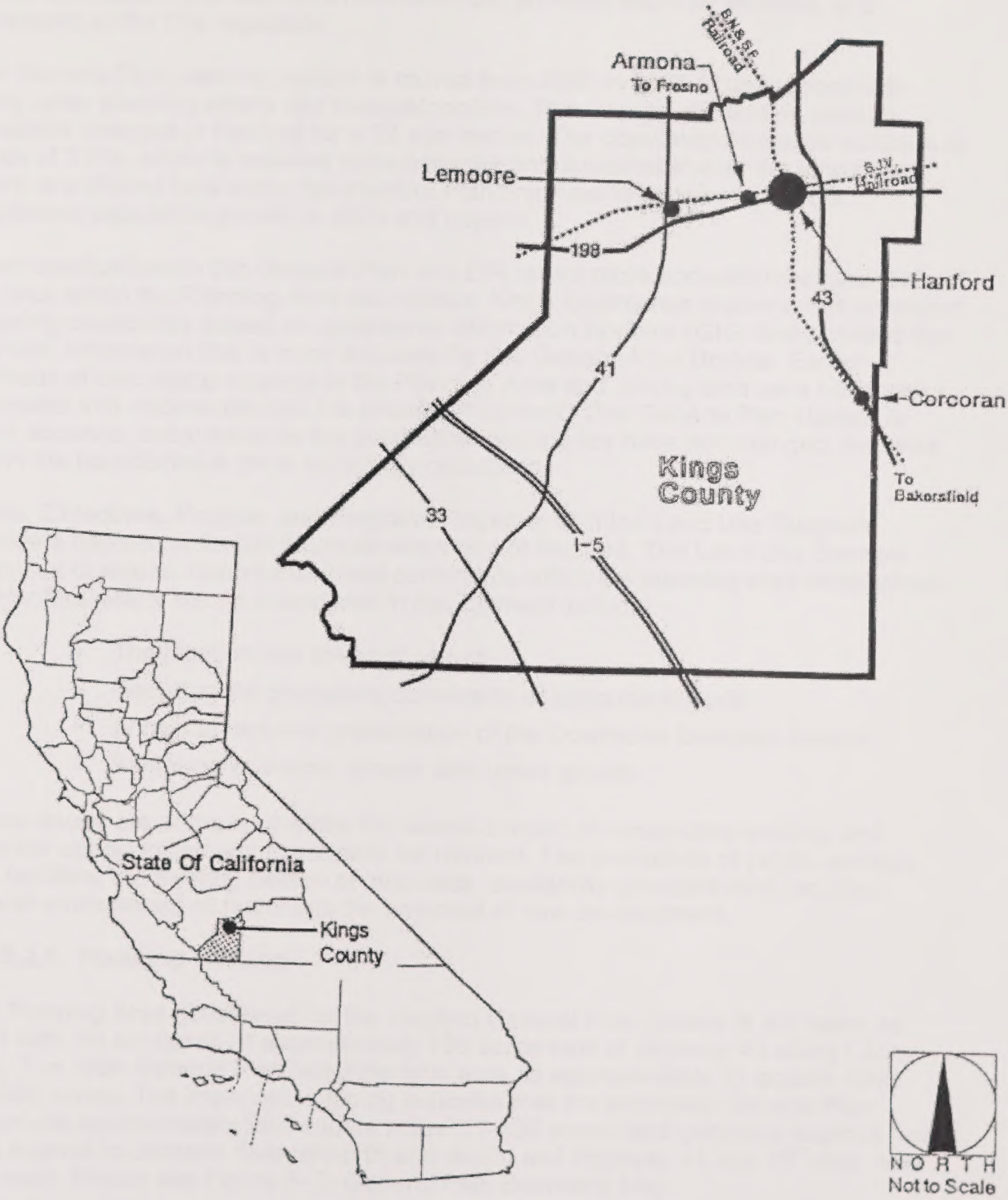
3.2. Overview of the General Plan

All cities in California are required to prepare and adopt a General Plan. The California Government Code defines specific purposes and content requirements for General Plans. The Hanford General Plan is intended to do much more than merely meet legal requirements, it is intended to be a statement of how the citizens of Hanford view their community, how they want it to be in the future, and most importantly, how they intend to deal with the planning and development issues facing the community.

The General Plan identifies policies and programs addressing the development of land, parks and open spaces, providing housing for current and future residents, conservation of natural resources, improvement and maintenance of circulation and transportation systems, control of noise, and protection of life and property from hazards. Additionally, the General Plan provides a basis for ensuring adequate funding sources exist, or can be developed, to address expanded public services, and maintain public facilities and infrastructure.

The last significant Hanford General Plan Update occurred in 1994. That update was significant in that it established a realistic Planning Area for Hanford and the City's growth beyond 2030. This Update does not significantly amend the City's Planning Area. However, some minor modifications to the Land Use Plan are proposed as well as updating of the General Plan text.

The only addition to the Planning Area is the inclusion of approximately 125 acres of land east of Highway 43 along Lacey Blvd. for the purpose of allowing Planned Highway



PROJECT LOCATION Figure 3- 1

Develop within the City. The City became aware of proposals for highway oriented projects in this location within the unincorporated territory and desired that development of any commercial activities be limited in scope, provided with City services, and developed under City regulation.

The General Plan planning horizon is moved from 2020 to 2025 to correspond with many other planning efforts and forecast models. This change of planning horizon considers changes in Hanford for a 23 year period. The population forecasts continue at a rate of 2.8%, which is believed to be accurate and sustainable over the long-term. There is sufficient land within the Hanford Planning Area to accommodate the forecasted population growth to 2025 and beyond.

Other clarifications in this General Plan and EIR reflect more accurate measurements of the area within the Planning Area boundaries. Kings County has implemented improved mapping capabilities based on geographic information systems (GIS) that provided the City with information that is more accurate for this General Plan Update. Earlier methods of calculating acreage in the Planning Area and among land uses both over estimated and underestimated the amount of territory. This General Plan Update is more accurate, because while the geographic boundaries have not changed, the area within the boundaries is more accurately calculated.

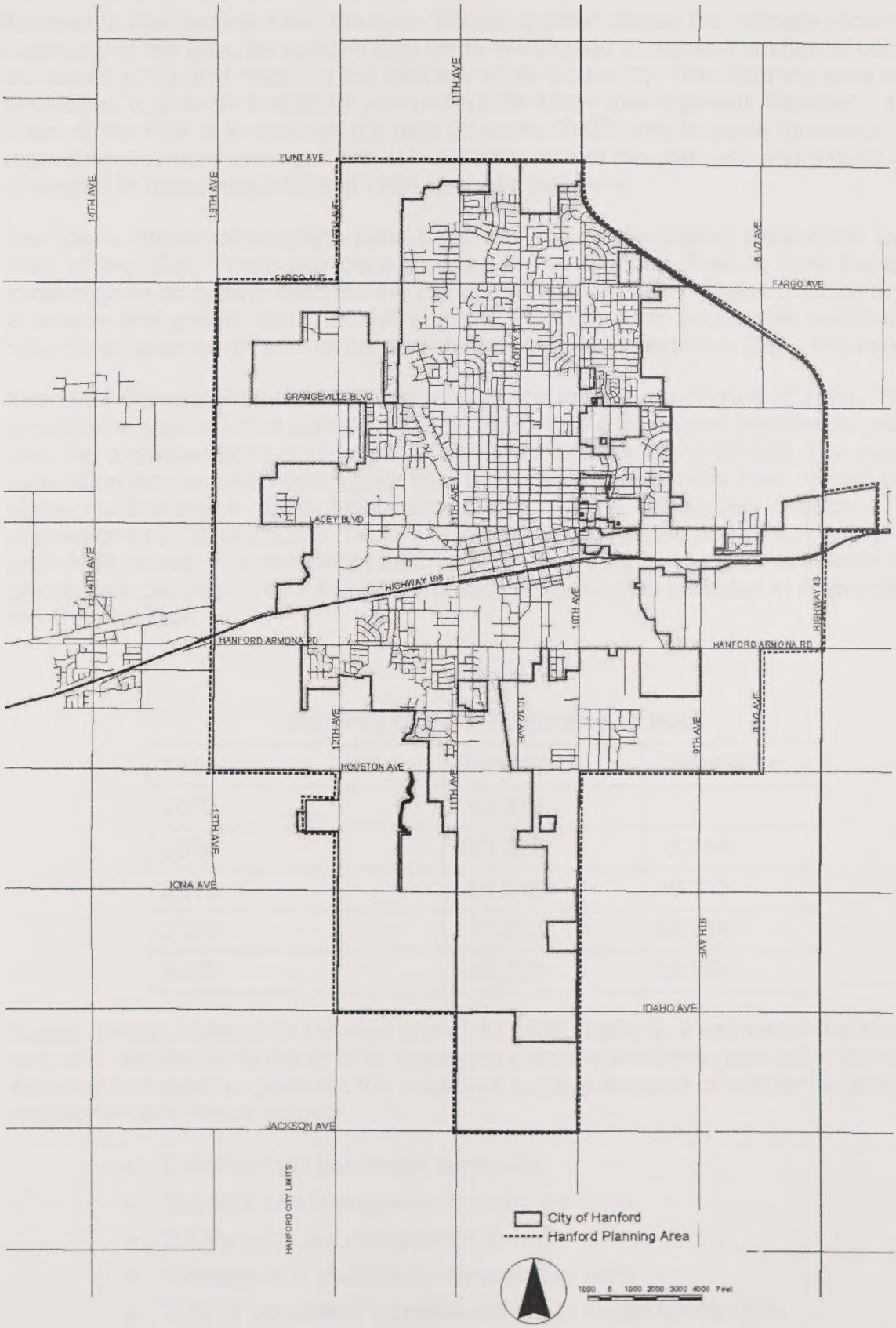
Goals, Objectives, Policies, and Programs, together with the Land Use Diagram, provide a framework for the future development of Hanford. The Land Use Element responds to issues, opportunities and constraints within the planning area established for Hanford. Major issues considered in this Element include:

- The location and timing of growth
- Resisting the premature conversion of agricultural lands
- Enhancement and preservation of the Downtown Business District
- Balancing economic growth with urban growth

These issues are addressed within the overall context of recognizing existing and potential opportunities and constraints for Hanford. The availability of public services and facilities, the existing pattern of land uses, availability of vacant land, and the natural environment all factor into the approval of new development.

3.2.1. Planning Horizon

The Planning Area considered for the Hanford General Plan Update is the same as 1994 with the exception of approximately 125 acres east of Highway 43 along Lacey Blvd. The 1994 General Plan listed the total area as approximately 27 square miles (17,300 acres). The improved mapping indicates that the proposed General Plan comprises approximately 29.5 square miles (18,899 acres) and generally extends from Flint Avenue to Jackson Avenue north and south, and Highway 43 and 13th Ave. east and west. Please see Figure 3- 2, General Plan Boundary Map.



PLANNING AREA MAP – Figure 3-2

As used in the General Plan, the term "planning area" means the ultimate urban boundary of the City. No specific time limits are implied or set as the interval between the existing City and reaching the ultimate urban boundary. The planning area was developed to provide a regional perspective for future development. Generally, the intent of the Plan is to forecast the next 23 years (2025) and to guide decisions regarding proposed development. It is recognized that the plan will, and should be amended to reflect regional and local changes over time.

The City's infrastructure plans have been and will be developed around the Land Use Plan of the City. There are clear policies in the General Plan to limit the sizing of infrastructure as growth reaches the Planning Area boundary. These policies are meant to ensure that growth does not spill over the Planning Area boundaries and that growth near those boundaries will not be growth inducing just outside the City's Planning Area.

The 1994 General Plan Update used an average annual growth rate of 2.6%. That Plan projected a population of about 83,525 by 2030. Using that same population growth rate, the projected 2025 population in the 1994 Plan was about 78,000. The actual 2000 population was almost 1,000 higher than the forecast in the 1994 Plan. Based on this higher number and a slightly higher growth rate of 2.8%, this update projects a population in 2025 of 82,239. Table 3- 1 presents a projected population growth to the year 2025 based on a number of assumptions, including an average estimated 2.6% growth rate per year. The full detail of growth projections is provided in Appendix A of the General Plan.

Table 3- 1

Hanford Growth Projection to 2025

Year	Population	Cumulative
2002	43,575	
2005	497,339	3,764
2010	54,348	10,773
2020	71,633	28,058
2025	82,239	38,664

Based on the projected population growth to 2025, Table 3- 2 estimates the residential and non- residential acres of land needed to accommodate the population forecast. Assumptions used to generate the projected number of acres of residential and non-residential land are as follows:

- 2.84 Persons per single family unit
- Average of 4.0 single-family units per acre
- 2.5 Persons per multiple-family unit
- Average of is multiple family units per acre
- 70% of population increase will live in single family units

- 30% of population increase will live in multiple family units
- 35% of City is non-residential (industrial or commercial)
- 20% of City is public land needs (streets, schools, parks, etc.)
- 50% reserve acreage (residential) to ensure land for development.

Table 3- 2

Land Needed to Accommodate Forecasted Growth

Year	Residential[1]				Non-Residential[1]			Total[1]
	Low Den.	Med Den.	Reserve	Total Res.	Com/Ind.	Public	Total Non Res.	
2005	232	30	131	393	92	52	144	537
2010	664	86	375	1,125	263	150	413	1,538
2020	1,729	224	997	2,930	684	391	1,074	4,004
2025	2,382	309	1,346	4,038	942	538	1,480	5,518

[1]*Cumulative Acres*

3.2.2. Land Use Changes in the General Plan

The major Land Use changes are as follows:

- Added Planned Highway Development as a new land use
- Changed the title of Regional Commercial to Planned Commercial
- Added development standards for Planned Commercial, Planned Highway Development, Mixed Commercial, Office Residential, and the conversion of Office Residential in the Historic District.
- Modified the Land Use Map for development on the eastside of Hanford.

Currently the General Plan has 4 residential, 8 commercial, 2 industrial, and several public facility, as well as an agricultural land use designations. The existing Zoning Ordinance is consistent with these land use designations. The proposed General Plan adds to the number of commercial designations and changes the title of Regional Commercial to Planned Commercial. Added to the commercial designations is Planned Highway Development (PHD). This designation is targeted for the intersection of Highway 43 and Lacey Blvd. In addition, a new office designation is added called Planned Office (PO). This designation is focused on development of a campus office park setting designed to accommodate larger office complexes. Table 3- 3 compares the existing General Plan Land Use designations with the proposed Land Use designations.

Proposed changes in the General Plan Land Use Map are shown on Figure 3- 3 Recommended Changes in the Land Use Map. The results of these proposed changes are shown on Figure 3- 4 Proposed General Plan Land Use Map.

Table 3- 3

Comparison of Existing General Plan Land Use Designations with Proposed Land Use Designations

Existing General Plan	**Proposed General Plan**
Residential	**Residential**
Very Low Density	Very Low Density
Low Density	Low Density
Medium Density	Medium Density
High Density	High Density
Commercial	**Commercial**
Office Residential	Office Residential
Office	Office
Not Included	Planned Office
DOWNTOWN COMMERCIAL	Downtown Commercial
Mixed Commercial	Mixed Commercial
Neighborhood Commercial	Neighborhood Commercial
Service Commercial	Service Commercial
Regional Commercial	Planned Commercial (change of title)
NOT INCLUDED	*PLANNED HIGHWAY DEVELOPMENT*
Industrial	**Industrial**
LIGHT INDUSTRIAL	Light Industrial
Heavy Industrial	Heavy Industrial
Other Classifications	**Other Classifications**
Public Facilities	Public Facilities
Conservation-Open Space	Conservation-Open Space
Agriculture	Agriculture
Urban Reserve	Urban Reserve

The balance of the land use designations remains the same with the exception of a change in the minimum lot size for the Very Low Density Residential designation. The proposed minimum lot size for Very Low Density is 12,000 square feet. The existing minimum lot size is 20,000 square feet.

The proposed General Plan also adds development standards for specific areas of the

City. Included in those areas are the 12th Avenue and Lacey Blvd. area (Planned Commercial and Planned Office), the Highway 43 and Lacey Blvd. area (Planned Highway Development), the 10th Avenue corridor (Mixed Commercial Development), Grangeville Blvd. area between Reddington and 10th Avenue (Office Residential), and the Historic District along Reddington, Irwin, and Douty (Office Residential).

Additionally, the proposed General Plan Land Use Map recognizes the Hanford Joint Education Center project. This proposed 180 acre project located east of 13th Avenue between Grangeville Blvd. and Lacey Blvd. would include a new Hanford Joint Union High School, College of the Sequoias community college center, and City of Hanford Sports Park. The project site is listed as a Public Facility (PF) on the General Plan Land Use Map.

The 1994 General Plan Land Use Map for the eastside of Hanford was shown as Urban Reserve with an underlying land use designation. This decision was made because major infrastructure constraints existed that must be corrected before any new urban scale development would be permitted. The land use plan for that area was necessary to ensure that future infrastructure plans would consider the ultimate needs of this part of the future City. A golf course centered development concept was being considered at in 1994 and the land use plan for the eastside would accommodate that concept. Since that time, the concept is no longer being actively discussed. The Updated Land Use Plan continues the philosophy of balancing residential and commercial growth in the City. A major purpose of balancing growth is to avoid cross City traffic congestion for shopping and employment. The land use on the eastside is intended to remain flexible until developments are proposed along with supporting infrastructure improvements.

The major changes in land use acreage shown in the 2002 General Plan Update as compared to the existing General Plan are primarily generated by the land use designations in the eastside of Hanford and by the siting of new schools (2 High Schools and the Hanford Joint Education Center. Changes in the east Hanford Land Use Map are shown as a "subset" of the entire Planning Area. This approach is taken to show that there is no critical change in land use in the proposed General Plan that would effect the carrying capacity of the Planning Area.

Table 3- 4 shows a comparison of the existing General Plan and the Proposed General Plan Land Use designations. This table compare the averages estimated in the 1994 General Plan Land Use Map as corrected by measurements that are more accurate.

Table 3- 5shows the eastern Hanford Planning Area (Urban Reserve) to demonstrate that changes in land use in this area account for most of the overall changes in the Plan.

3.2.3. Land Use Map Changes

Figure 3-3 presents the recommended changes to the existing General Plan Land Use Map. Figure 3-4 represents the Land Use Map as proposed.

3.2.4. Zoning Map Amendments

As part of updating the General Plan Land Use Map, the City is also processing Zoning

Map Amendments that will make the City's Zoning Map consistent with the approved General Plan Land Use Map

Table 3- 4

Comparison of Land Use Designations Between the Existing General Plan and Proposed General Plan

Land Use Designation	2002 Plan Update Acres	1994 Plan Acres	Difference Acres
Residential VLD	1,400	1,344	56
Residential Low	5,353	5,287	66
Residential Med	774	1,068	-294
Residential High	118	177	-59
Agriculture	2,686	2,686	0
Commercial	1,693	1,850	-157
Office	324	126	198
Industrial	3,286	3,286	0
Public Facilities	1,572	1,277	295
Right-of-ways	1,490	1,490	0
Parks/OS	204	184	20
Total	**18,899**	**18,774**	**125**

Table 3- 5

Eastside of Hanford Planning Area as a Subset of the Land Use Calculations

Land Use Designation	2002 Plan Update Acres	1994 Plan Acres	Difference Acres
Residential VLD	86	0	86
Residential Low	696	414	282
Residential Med	124	373	-249
Residential High	21	80	-59
Agriculture	0	0	0
Commercial	181	312	-131
Office	41	37	4
Industrial	0	0	0
Public Facilities	70	23	47
Parks/OS	60	40	20
Total	**1,279**	**1,279**	

3.2.5. Residential Standards

The Land Use Element must also establish standards of population density and building intensity for each Land Use classification. These figures are stated as 'average' housing units per gross acre; population density is obtained by applying average persons per

households as set from time to time by the State Department of Finance. Because these numbers are averages, they are stated in ranges to allow for a variety of developments to be consistent with the plan. Also, since the City can not regulate the number of persons per family, the ranges ensure that most services can be set appropriately.

3.2.6. Non-Residential Standards/Floor Area Ratios [FAR]

For non-residential uses, the Plan specifies a maximum permitted ratio of gross floor area to site Floor Area Ratio or FAR). The FAR is intended to regulate bulk while allowing flexibility in determining the height and placement on the lot consistent FAR Depiction with the City Zoning Ordinance. In some cases the FAR is set to allow flexibility in the Downtown Area, and development outside of the downtown will be held to a different standard. For example, a 10,000 square foot property with a FAR of 1.0 would be permitted to have a maximum 10,000 square foot building. Required setbacks, height of structures, parking and landscaping would effect total coverage.

3.3. Zoning Consistency

While the Land Use Element specifies a range of unit densities per acre, the City Zoning Ordinance regulates lot size standards within the permitted density range. Under a given Land Use Designation, several different development zones may be appropriate, Table 3- 6 provides a listing of typical Zoning Districts for each General Plan Land Use Designation. The City of Hanford Zoning Ordinance is, in most instances, hierarchical in that uses of a lower intensity zone are often allowed in the next more intensive zone. To allow for this, the residential units per acre ranges overlap as do the floor area ratios for commercial and industrial designations.

3.3.1. Density-Intensity

The density/intensity standards described in the General Plan do not guarantee that development projects will be approved at the maximum density or intensity specified for each classification. The existence of one or more development constraints could limit the density or intensity of development to less than projected in the General Plan classification. Typical examples of such development constraints include, but are not limited to the following: drainage issues, archaeological sites, wetlands and stream courses, easements, noise constraints, other environmental factors, community design requirements, and zoning regulations.

Table 3- 1 shows gross density standards for residential Designations and FAR standards for non-residential Designations. Assumed averages for residential classifications are listed in the following descriptions.

Table 3- 6

General Plan and Zoning Consistency/Density and Intensity Table

Land Use Designation	Unit Density			FAR			Coverage	Pop/Ac.	Typ. Zoning	Min. Lot Size	Notes
	Min.	Typ.	Max.	Min.	Typ.	Max.				Square Feet	
VLD Very Low Density	0	2	2				40%	10	R-1-20	20,000	One house per lot
	1	3	3					14	R-1-12	12,000	One house per lot
LD Low Density	2	5	9				40%	30	R-1-10	10,000	New Zone - One house per lot
								30	R-1-8	8,000	One house per lot
								30	R-1-6	6,000	One house per lot
Medium Density	7	12	15				50%	30	RM-3	6,000	3,000 sq.ft. Of lot area per unit
High Density	10	15	22				60%	45	RM-2	6,000	2,000 sq.ft. Of lot area per unit
OR Office/Residential	4	15	22	0.25	0.6	1	100%	45	OR	6,000	
DC Downtown Commercial	4	15	22	0.5	1	3	300%	45	DC	0	
MC Mixed Commercial	4	15	22	0.25	0.4	0.5	50%	45	MC	0	
PO Planned Office				0.25	1	3	300%		PO	20,000	New Zone
O Office				0.25	0.5	0.8	80%		OR	20,000	
NC Neighborhood Commercial				0.25	0.4	0.5	50%		NC	Now 3-5 acres	Except on existing zoned land.
CC Community Commercial				0.25	0.4	0.75	75%		CC	Now 5 acres	Maximum 30 Acs.
SC Service Commercial				0.25	0.4	0.5	50%		SC	6,000	
PC Planned Commercial				0.15	0.4	0.75	75%		PC	10 Acs.	New Zone (title change only)
~~RC Regional Commercial~~				~~0.15~~	~~0.4~~	~~0.75~~	~~75%~~		~~RC~~	~~10 Acs.~~	Title changed to PC
PHD Planned Highway Development				0.15	0.4	0.75	75%		PHD	10 Ac.	New Zone
LI Light Industrial				0.25	0.5	1	100%		LI	6,000	
I Industrial				0.3	0.5	2	200%		HI	0.5 Ac.	
PF Public Facilities				0.1		1	100%		PF	0	
CO Conservation and Open Space				0.1		0.1	10%		CO	0	
AG Agriculture	0	0.01	0.05	0	0.01	0.05	5%		AG	20 acres	See exceptions HMC 17.14.60
UR Urban Reserve Overlay	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	UR	20,000	UR, HMC Sec. 17-12.10

3.4. Land Use Designations

3.4.1. Residential Designations

The Land Use Element and Diagram include four residential categories that range in density and intensity from a maximum of three units per acre up to 22 units per acre. These categories are intended to:

1. Identify areas throughout the planning area which are acceptable for housing; and,

2. Clarify the overall type of housing to be developed within each category; and,

3. Allow for a mixture of housing types, lot sizes and affordability.

Each residential category includes a unit per acre minimum and maximum density specified in a range of housing units per gross acre. Units per gross acre is used because it is easier to understand and convey. Types of housing include single family units and multiple family units including duplexes and apartments.

3.1.4.a VLD, Very Low Density Residential: 0-3 dwelling units/gross acre

Larger 'estate-style' lots for single family residential development characterize this category. Typical lot sizes would range from 12,000 to 20,000 square feet or greater. Except in extraordinary circumstances it is not envisioned that lots greater than 1 acre would be appropriate within the City limits due to restrictions on the types *of* activities usually desired on lots over an acre. Exceptions are where adjoining public facilities such as wastewater treatment facilities, or other environmental factors such as noise buffers may require a substantial space buffer between the facility and residential uses.

3.1.4.b Low Density Residential: 2-9 dwelling units/gross acre

This category includes single family development on lot sizes more typically found in urban settings. Individual lot sizes would typically range from 6,000 to 12,000 square feet in size. Under a Planned Development Zoning provisions, smaller lot sizes may be permitted when clustered around open space, such as a golf course or lake.

3.1.4.c MD, Medium Density Residential: 7-15 dwelling units/gross acre

Typical duplex or lower density apartment complexes and other non-traditional designs such as zero lot lines, patio homes, and townhomes with lot sizes ranging from 4,500 to 7,500 square feet for single family developments. When the parcel map or subdivision process creates new lots, the minimum lot area is to be 6,000 sq.ft. and the number of units per lot is based on 3,000 square feet of area for each dwelling unit. Existing nonconforming lots can also be developed at 3,000 sq.ft. lot area for each dwelling unit. It is intended that development be conveniently serviced by neighborhood commercial and recreational facilities and have access to major collector or arterial streets.

3.1.4.d (HD), High Density Residential: 1O~22 dwelling units/gross acre

This land use is intended primarily for multi-family apartment and condominium development in proximity to major arterial streets, commercial and recreational facilities, and employment centers. When the parcel map or subdivision process creates new lots, the minimum lot area is to be 6,000 sq.ft. and the number of units per lot is based on 2,000 square feet of area for each dwelling unit. Existing nonconforming lots can also be developed at 2,000 sq.ft. of lot area for each dwelling unit.

3.4.2. Downtown Designations

In order to preserve the integrity of the downtown, and encourage its continued vitality and economic strength, specialized land uses and development approval procedures have been adopted. The following Land Use Designations are typically found only within the boundaries of the of the downtown business district.

The Downtown Business District generally includes the Central Parking and Business Improvement Area and extends between the Burlington Northern and Santa Fe Railroad (BN&SF) right-of-way on the west, Highway 198 on the south, 10th Avenue on the east, then on Ivy street to Harris, up to Malone then south along Reddington to Florinda, west on Florinda to Park, then south on Park to the BN&SF railroad tracks.

The modification to this designation in the 2002 General Plan Update is the addition of standards for conversion of residential to office in the defined historical area generally along Reddington, Irwin, and Douty Streets south of Malone Street and north of Dewey Street.

In addition to this historic consideration, the Office Residential designation is applied to homes fronting Grangeville Blvd. between Irwin Street and 10th Avenue. Development standards have been included in the General Plan for both of these locations.

3.2.4.a OR, Office Residential 0.25 - 1.0 FAR [4-22 Units/Acre]

Surrounding much of the historical downtown are older homes that may no longer function as conventional single-family units. Many of these structures are large and have stunning architectural features that add to the atmosphere of the downtown. To encourage the preservation of these structures, the Office Residential designation allows for either office or residential uses and a mixture of offices and residential uses in these structures. Development standards are included in the General Plan for the historic area along Reddington, Irwin, Douty Streets, and along Grangeville Blvd. The higher FAR of this Designation is intended to encourage development of second, and subsequent floors above existing commercial uses. Construction of major new office buildings will be discouraged and focused in the Office land use designation. A typical FAR in the OR is 0.6.

3.2.4.b DC, Downtown Commercial/Mixed Use 0.5 - 3.0 FAR [422 Units/ Acre]

The Commercial Core is also located in the City's Downtown District. However, this area has its own unique character as a pedestrian oriented, concentrated area of retail,

service and office uses. Future development should enhance the vitality of the Downtown District. Over time the Downtown District will evolve into a more unique and focused commercial and entertainment center of the community while retaining a diversity of commercial and residential uses. Multi-family residential may also be permitted in DC. The Zoning Ordinance governs the permitted uses in this area and where appropriate design and preservation requirements within the Historic zone. Higher intensity development should be encouraged in the DC than in the other areas of the City. Public parking availability and access are essential for full development of the downtown area. A Master Plan or Specific Plan may be prepared to guide development and apply exceptional standards where desirable. Ultimately the FAR and use may be constrained by the amount and location of available parking, particularly with major office development. A typical FAR in the DC is 1.0, however, FAR's in the DC may be as high as 3.0.

3.4.3. Commercial Designations

Specific land uses described in each Designation are cited as examples of typical uses and should not be considered a comprehensive list of allowable or conditional uses. The Zoning Ordinance establishes allowable uses, uses approved through administrative action, and conditional uses for each zone classification. Both a range of Floor Area Ratios, FAR, and typical FAR's are provided for each Land Use. Typical FAR's are used to calculate anticipated employment generation, lot coverage and land need.

3.3.4.a 0, Office 0.25-0.8 FAR

This Designation is intended for large non-retail, business and professional offices. Unlike the OR Designation, no residential uses would be permitted within a 0 Designation. Further, new 0 sites would be 20,000 square feet or larger to encourage smaller offices to locate downtown. A typical FAR for this Designation is 0.5.

3.3.4.b PO, Planned Office 0.25 – 3 FAR

This is a new land use designation in the 2002 General Plan Update and the development approach is similar to Planned Commercial. The Planned Office designation is located in the southwest quadrant of 12th Avenue and Lacey Blvd. This area of the City is emerging and providing for an office campus to attract larger office complexes is considered essential to the City's long term economic viability. Planned Office is not intended for aggregations of small office buildings, rather a consistent and integrated designed complex with shared parking facilities. While the minimum parcel size is 20,000 square feet for this designation, the City will encourage larger developments including multi-story buildings and parking structures. Planned Office development in this area must provide a unique setting using landscaping or other amenities. The notion of Planned Office is to make it distinctive and attract larger office tenants. Accessibility will play a key role in the ultimate location. Also similar to Planned Commercial to the west, the City will encourage master planning of all PO sites without regard for property lines within the designated areas. At a minimum master plans would indicate potential pad sites, and orientation of buildings, phasing of development, circulation and access from streets and interconnections between sites, utility connections, landscaping, and parking to be constructed. Street and parking lot

landscaping shall be installed and maintained to promote a pleasing visual environment. A typical FAR for this Designation is 1.

3.3.4.c NC, Neighborhood Commercial: 0.25-0.5 FAR

This Designation includes convenience commercial and neighborhood shopping centers providing a range of necessary day-to-day retail goods and services serving a localized market. Neighborhood Commercial Centers are typically developed at about one mile intervals on a single corner of the intersection of Collector Streets, or Arterial and Collector Streets. Development is limited to major anchor uses not exceeding 45,000 square feet such as a supermarket, with other supporting services such as drugstores, laundromats, barber and beauty shops, restaurants, auto parts stores, service stations, and other similar uses to serve the day to day needs of the surrounding residential development. The exception to the maximum size of the anchor tenant is allowed for in the City's Zoning Ordinance based on an existing larger parcel. Street and parking lot landscaping shall integrate the site with the balance of the neighborhoods. This Designation is intended for parcels no larger than 5 acres in size. A typical FAR for this Designation is 0.4.

3.3.4.d MC, Mixed Commercial [4-22 Units/Acre] 0.25-0.5 FAR

The Designation is intended to allow a mixture of small commercial, office, and multi-family uses along the 10th Avenue corridor between Grangeville Blvd. and Lacey Blvd. It is not anticipated that additional MC Designations will be created at any other location. This is a special Designation is distinct to this corridor which is in transition from older existing residential uses to commercial uses. Special design considerations are necessary because of existing lot depth, limitations of direct access to 10th Avenue, and right-of-way requirements for the future widening of 10th Avenue . The Land Use Element is proposed to be amended to provide for policies for new MC development along 10th Avenue. A typical FAR for this Designation is 0.4.

3.3.4.e CC, Community Commercial: 0.25- 0.75 FAR

This Designation includes a variety of commercial uses that serve both a large local area and, to some extent, the region. Typically, CC development is integral with, and forms a commercial concentration with surrounding offices, possibly regional commercial uses, and higher density development served by a combination of Collector and Arterial streets. New CC development would include multiple anchor tenants such as a large grocery-drugstore combination. There would also be a larger number and/or variety of smaller tenant stores. Street and parking lot landscaping shall be installed and maintained to promote a pleasing visual environment. New CC Designations would typically be less than 30 acres in size and located at major arterial intersections with a FAR of approximately 0.4. Existing CC sites, typically in the downtown area or surrounding fringe, could be as small as 6,000 square feet.

3.3.4.f SC, Service Commercial: 0.25- 0.5 FAR

This Designation includes a broad range of commercial activities which can include freeway (travel) oriented businesses, businesses which have both retail and service components, and other businesses which can be located in a commercial area and not create a nuisance or interfere with normal commercial activities. Among these uses are auto sales, motels, restaurants (including fast food), service stations, auto repair, building material supply, warehousing, wholesale trade, contractors, suppliers, equipment yards, and other similar uses. Also included in this definition are business parks which are designed as clusters of buildings containing offices, warehouses and storage areas. Business parks should be master planned including extensive landscaping and screening from surrounding uses. Uses within this Designation would usually be conducted entirely within a building, with outside storage screened and/or blocked from public view. Outside storage of unprocessed raw material or large industrial equipment would not be appropriate in a SC area. SC designated areas could range in size from 6,000 square feet to 20 acres with a typical FAR of 0.4.

3.3.4.g PC, Planned Commercial: 0.15- 0.75 FAR

The existing land use designation of Regional Commercial is renamed in the 2002 General Plan Update to Planned Commercial. The General Plan Update also provides for development standards for Planned Commercial development in the 12th and Lacey Blvd. area. The Planned Commercial designation includes Planned shopping centers, highway oriented retail uses (new or used vehicle sales are not allowed), and enclosed recreation facilities (theatres are not allowed). Planned shopping centers where retail and entertainment activities are concentrated and are intended to address market needs of the larger community and not compete with uses in the Downtown Commercial district. It is the City's intent to preserve the downtown as a viable commercial center. The Planned Commercial districts provide for retail commercial areas outside of the downtown commercial district of the city. These areas will be within a unified shopping center complex to serve the community. Several major anchor tenants, along with supporting uses, would be expected at a Planned Commercial center. Specifically excluded from the PC areas are financial uses, furniture stores, professional offices and professional service uses, commercial offices and commercial service uses. At least fifty-one (51) percent of the gross floor area of the building premises in which the Planned Commercial businesses will operate will be used for the retail sale of new merchandise. The fifty-one (51) percent gross floor area requirement may be reduced if the City determines that more than forty-nine (49) percent of the gross floor area of the business premises is required to perform other tasks directly associated with the retail sale of new merchandise. Included in the 49% are any services to be rendered to customers of the business premises that are incidental to and specifically related to the new merchandise sold upon the business premises.

Development standards for the PC require a minimum of 10-acre initial development. Five-acre increments will be allowed after the initial 10-acre site is developed. Development of small sites along street frontages will not be allowed without first development of the major tenant of the proposed project. A "major tenant" is defined as a structure of 50,000 square feet or more occupied by a single business. A Smaller

structure for one major tenant may be allowed if tenant is a nationally recognized retail sales activity (except for fast food operations).

Newly designated PC areas would be located adjacent to major arterials, expressways, highways and/or freeways. The Planned Commercial development is expected to provide convenient access to freeways, highways and major arterial streets. Master planning will be encouraged for all PC sites, without regard for property lines within the designated areas, at the time of annexation, subdivision or conditional use permit. Street and parking lot landscaping shall be installed and maintained to promote a pleasing visual environment and where feasible connect with adjoining parking lots to reduce trips on City streets. New PC designated areas could range between twenty (20) and one hundred (100) acres in size with a typical FAR of 0.40. Planned Commercial development is intended to be flexible under the plan unit development (PUD) procedures. However, where appropriate the design of structures and sites shall be in harmony with the characteristics of the buildings in the central commercial core of the city.

3.3.4.h PHD, Planned Highway Development: 0.15 - .75 FAR

This is new commercial land use designation. This designation is applied to non-agricultural designated land at the intersection of major state highways within the Planning Area of the City where adequate access exists to provide for services to the traveling public. Any designated area will be the subject of an Area Plan that is adopted by the City. The developer(s) will be required to prepare a detailed plan for City approval. The Area Plan must include the entire area of development (quadrants east of Highway 43, north of Highway 198; west of Highway 43 and north of Lacey Blvd. south of railroad; west of Highway 43, north of Highway 198, and south of Lacey Blvd.). The General Plan Update includes development standards for new PHD development. The elements of the Area Plan shall include, but not limited to: a unified architectural theme consistent with the history and quality of the City of Hanford; development design that provides for adequate access and parking while presenting a pleasing and consistent appearance to the travelling public; landscaping; adequate internal circulation; and open space to accommodate a variety of highway oriented businesses.

Businesses shall be restricted to highway oriented services. Major retail sales uses will not be allowed. All uses will require Conditional Use Permits issued by the City to ensure consistency with Area Plan. An Infrastructure Scheduling Plan shall be adopted and implemented. Initial development may take place utilizing wells and septic tanks, however, provision for connection to City services shall be constructed at the time of development. On-site fire suppression water reserves may be required. A typical FAR for this Designation is 0.4.

3.4.4. Industrial Designations

3.4.4.a LI, Light Industrial: 0.25-1.0 FAR

This Designation is intended for light industrial operations, and could include large office

uses. Uses may include light manufacturing, warehousing, public and quasi-public facilities and operations, offices and administration facilities, research and development, and support business and commercial facilities. These areas are characterized by high truck traffic, greater employment density and significant on-site material storage needs. Uses would be conducted mostly within buildings or structures with some outside storage or activity permitted. Light Industrial Designations are appropriate between residential and other industrial uses, or commercial and heavy industrial uses where minimal environmental conflicts can be demonstrated between the use and adjacent residential development. To the extent allowed by parcels, landscaped street frontages and a business park setting typically characterize development within this Land Use. A typical FAR for this Designation is 0.5 although, with some intensive office-warehouse type of use, the FAR could be as high as 1.0.

The City encourages light industrial development at the Hanford Airport, particularly where such businesses can benefit by access to airport activities. Light industrial development at the Hanford Airport can include associated office development, warehousing, and research and development uses.

Uses not permitted within this Designation are those that require open air storage of large quantities of raw, or semi-refined products. Retail uses are discouraged in this category, but may be permitted as a supplemental use to a permitted use.

3.4.4.b HI, Heavy Industrial: 0.3 - 2.0 FAR

This Designation provides for industrial parks, manufacturing, truck terminals, public or quasi-public facilities and structures, including utility operations, fabrication, processing, assembling, warehousing, wholesale sales, research and development activities. This Designation differs from Light Industrial in that outside processing and storage of materials may be permitted. Incidental retail uses which have a direct relationship to the industrial use or meet the day to day needs, such as food and fuel, of employees working in the Industrial area. Due to potential land use conflicts, Heavy Industrial designated lands should be buffered from residential and commercial uses by either LI or SC designated areas, or large open spaces. Care needs to be taken in designating new areas of HI so that new conflicts are not created. However, effective FAR may be limited because of airport safety height regulations. A typical FAR for HI development would be 0.5, but could range as high as 2.0 if large amounts of office, manufacturing or warehousing space are required.

3.4.5. Other Land Use Designations

Other land uses designations are used by the City to identify public facilities, or land that is not intended for intensive development, including agricultural land in the City used as a buffer area to potentially conflicting land uses (airport clear or approach zones). In some instances, the Designation is used to identify lands belonging to another governmental agency over which the City has limited land use control. Examples of this include schools and the county office buildings.

3.5.4.a PF, Public Facilities: 0.10-1.0 FAR

This Designation includes schools, community parks, storm drainage basins and other

similar activities conducted on property owned by the County or other State, Federal or local agencies. While larger public facilities are identified as PF, smaller facilities such as lift stations, water wells and substations, etc., can be located in any Land Use Designation. Due to the nature of this Designation there is no way to determine a typical FAR.

3.5.4.b OS, Open Space & Conservation: 0.01-0.1 FAR

The Open Space & Conservation identifies parks, pathways, storm drainage basins and water recharge areas, reservations for future freeway interchanges, areas designated for noise attenuation, and major landscape corridors along entryways into the City. While the OS Designation is intended primarily for public agency use, there are instances when private land may be designated OS. These would include land with storm drainage or other open space 'easements' upon it, or private environmental reserves. As with the PF Designation there is no typical FAR. By its very nature, however, this Designation is expected to have a very low FAR.

3.5.4.c AG, Agriculture: 0.01 to 0.05 FAR

Agricultural Land Use Designations are limited in scope and purpose within the City. The primary reason for the Designation is to provide a buffer between sensitive and potentially conflicting land uses. A good example of the application of this Designation is the Hanford Airport runway approach and clear zone. Another purpose for the Designation is to allow the annexation land to the City on which a Williamson Act Contract is still active. This Designation is considered short term while the contract remains in effect and for the purpose of accepting the land into the City with the eventual conversion of that land to an urban use consistent with an accepted development plan. The typical FAR portrays large acreage with a single primary dwelling and associated out-buildings.

3.5.4.d UR, Urban Reserve

The Urban Reserve (UR) is applied to land within the City's Urban Limit boundary that has an underlying Land Use Designation in the General Plan. However, development of the land is not anticipated within the planning horizon or after first addressing significant infrastructure constraints that would move the projected development threshold forward. Removal of the UR Designation in the industrial area can be based on need for large sites and addressing the specific infrastructure needs of major employers for the City of Hanford. UR Designations for residential and commercial areas promotes utilization, efficiency, and cost recovery of existing capacity in infrastructure systems before expanding or creating new competing systems.

3.5. Circulation and Transportation Element

Development standards for Arterial and Collector Streets were removed from the General Plan policies in favor of including them in the City's development standards manual. No other significant policy changes to the Circulation Element are proposed. The introductory text of the Circulation Element was updated to reflect current conditions.

3.6. Hazards Management Element

No significant policy changes to the Hazards Management Element are proposed. The introductory text of the Hazards Management Element was updated to reflect current conditions.

3.7. Open Space, Conservation & Recreation Element

Minor modifications to this Element are proposed and the introductory text has been updated to reflect current conditions. Proposed Policy changes in this Element include reinforcing the need to provide for landscaped open space along the path of the BN & SF railroad right-of-way through the residential area of the City. Given the forecasted population, the parkland requirements have been updated to require 58 additional acres of Neighborhood Park and 77.3 acres of Community Park by the year 2025. Consistent with the City's policy of joint use facilities, the Hanford Joint Educational Center will provide additional parks development in the City.

3.8. Public Facilities Element

This Element of the General Plan Update was revised to reflect current information regarding the City's existing and planned infrastructure. There were no substantive changes to City policy in this Element.

3.9. Housing Element

The Housing Element for this General Plan Update remains unchanged. The City is in the process of updating the Housing Element, which will be considered separately at a later date.

HANFORD GENERAL PLAN

STAFF & CITIZENS COMMITTEE RECOMMENDED CHANGES

January 2002

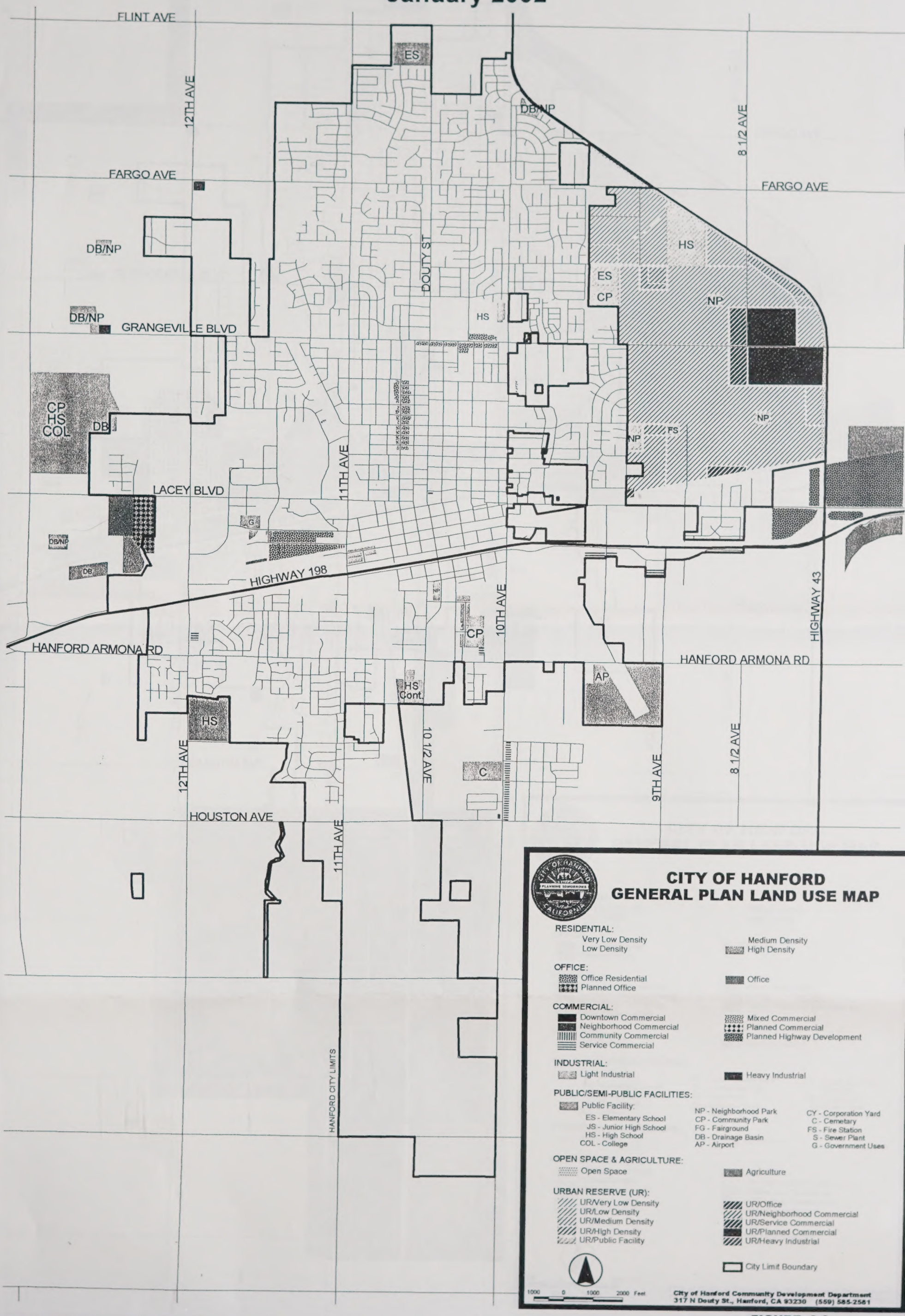


FIGURE 3-3

4. ENVIRONMENTAL ANALYSIS

4.1. AESTHETICS

4.1.1. Environmental Setting

Landform arid Topography

The General Planning Area is regionally located within northeastern Kings County. the incorporated City of Hanford is developed predominately as an urban community. Vacant land is included within the City limits and most of this land is located in the Kings Industrial Park in the southern part of the City. The unincorporated part of the Planning Area is predominantly rural in character with agriculture, rural residential and vacant land uses. There are unincorporated County islands within the Planning Area that have been developed at urban densities and have not been annexed to the City. These areas (primarily east of 10th Avenue between Lacey Blvd. and Grangeville Blvd. and along 10th Avenue south of Hanford Armona Road) appear to be part of the Hanford urban setting.

The Planning Area is flat with little topographic relief. The terrain generally slopes from the northeast to the southwest. Topographic elevations range from a high of *255* feet above sea level in the northeast area of Hanford to a low of 240 feet above sea level in the southwestern portion of the Planning Area.

Visual Characteristics

The Planning Area contains areas of aesthetic values ranging from Downtown District buildings located in the Central part of the City to the agricultural fields and orchards. The Downtown Business District is generally defined as the historic commercial center of the City, roughly bounded by Fuller Street, Reddington Street, Harris Street, and Sixth Street. Within this area are a number of buildings and houses, which have significant historic value. Many of the buildings and houses were constructed in the 1880-90 and in the 1900-20 time periods. The City of Hanford has adopted a Historic Resources Combining District in the Zoning Ordinance to provide protection and guidance in the maintenance and reconstruction of historic buildings.

The agricultural production in the unincorporated territory of the Planning Area surrounding the City include tree crops, vegetables and field crops, and dairies. Refer to the Agricultural Resources Section 4.2) of this EIR for a detailed description of crops produced in the Hanford Area.

4.1.2. Impact Analysis

4.1.1.a Methodology

The Planning Area can be divided into classifications of urban intensity and rural setting. Urban intensity ranges from highly compact developed commercial areas such as Downtown Hanford to commercial centers at 12th Avenue and Lacey Blvd. to residential subdivisions and large site industrial development. The City of Hanford is a typical Central Valley community in the design and layout. The expansion of the City into the

Planning Area would primarily be residential development with new major commercial nodes in the eastern part of the Planning Area. Existing conditions in the Planning Area are typically rural agricultural in row crops or orchards. The impacts or expanding urban development will be incremental and generally in the same character as currently exists within the City. Evaluation of those impacts are focused on the interface between urban and rural settings.

4.1.1.b Significance Criteria

State CEQA Guidelines define significant land use effects as those that

a) Have a substantial adverse effect on a scenic vista?

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

4.1.1.c Impacts

Land development needs to support the projected 2025 population indicate that as much as 5.919 acres of land in the Planning Area may be developed. Included in the forecasted 5,919 acres is about 1,445 acres of vacant residential land as a "market factor" to maintain competitiveness between property owners. Therefore, not all of the land will be at full build-out by 2025.

The Planning Area is located in an area that can be considered a scenic vista. There are no elevated landforms in the community that would represent an opportunity for a scenic vista of surrounding land. The distance of the community to the Sierra Nevada Mountains (except on an exceptionally clear weather day) diminishes views to the mountains as a scenic vista. Impacts to scenic vistas are considered as less than significant.

The slough remnants in the Planning Area represent the single largest undeveloped visual feature. The General Plan contains policies that will consider integrating these natural features into open space corridors or as public facilities. Older neighborhoods represent a scenic and historical resource for the City. Structures and healthy older trees represent scenic values. The General Plan contains policies that conserve these resources. There are no State Scenic Highways located in the Planning Area. Impacts to scenic resources are considered less than significant with the implementation of General Plan policies.

Implementation of the General Plan would result in an intensification of urban scale development in the Planning Area. Urban scale development will reduce the amount of rural character land within the Planning Area in equal amounts. Growth into the

Planning Area will be incremental. It is the policy of the General Plan to support Kings County's General Plan to maintain agriculture outside of the Planning Area through agricultural land use designations. It is also the policy of the General Plan to not allow "leap frog" development into the Planning Area and reduce infrastructure sizing as it approaches the Planning Area boundary. The Land Use Map also reduces density of residential uses near the boundary of the Planning Area. However, a future commercial node is shown on the eastside of the Planning Area near Highway 43 and Grangeville Blvd. and a Planned Highway Commercial development near the intersection of Highway 43 and Lacey Blvd. where access may be facilitated. These policies are intended to help preserve the agricultural character of the community outside of the Planning Area. In addition, as urban uses approach the Planning Area boundary, particularly along Highway 43 and Highway 198, the General Plan contains policies for landscape buffers between urban uses and the transportation facilities to ease the visual impacts of the urban viewshed. With the implementation of General Plan policies, impacts to visual character are considered less than significant.

Intensification of development within the Planning Area will change viewsheds in the Planning Area. To the extent that the change degrades the visual character or quality of the Planning Area is a subjective discussion. Open space and farmland is often characterized as having a superior visual quality compared to an urban setting. The General Plan and the City's development standards require landscaping along major arterial streets in the City and proposes landscaped buffers along freeways as a means of improving the visual quality of urban development. Additionally, landscaping is proposed along the Burlington Northern and Santa Fe alignment through the City to improve the visual quality of that corridor for the travelling public.

The City of Hanford and the Planning Area lies in the middle of tens of thousands of acres of agricultural land ranging from intensive agriculture to grazing land. The urban area represents a break in the pastoral setting and diversity in the character of the Central Valley. To the extent that the values of the urban setting are uncluttered and visually interesting, the scenic value of the urban area may be complementary to the pastoral setting and not at all degrading. Impacts to the visual character or quality of the Planning Area is considered potentially significant.

As urban uses expand from the existing margins of the City new sources of light and glare will be introduced into the rural area especially at the margin of the urban area. This represents an encroachment into an area that has not been subjected to urban level intensity. The General Plan contains policies that reduce the density and intensity of urban scale development at the boundaries of the Planning Area. Very low density residential uses generally are planned at the Planning Area boundary. These low density uses will produce less light and glare and provide a transition between more intense urban uses and the rural area outside of the Planning Area. The interim impact is expected within the Planning Area where agricultural uses are replaced with urban scale uses. In these cases, higher intensity urban uses may abut agricultural uses within the boundary of the Planning Area. At build-out of the General Plan the impact of new sources of light and glare are considered potentially significant.

The General Plan contains policies for the preservation of the historic character in the City's Downtown including the older neighborhoods on Reddington, Irwin and Douty Streets. A Specific Plan for the Downtown Business District is advocated by the General

Plan to assist in implementing historic preservation and redevelopment efforts. In addition, the General Plan requires Master Plans or Specific Plans for major new development projects such as 12th Avenue and Lacey Blvd. and in the eastern portion of the Planning Area. With implementation of General Plan policies, the impact to the visual character of older neighborhoods and newly developing areas is considered less than significant.

4.1.1.d Mitigation Measures

The General Plan contains Objectives, Policies, and Programs focused on managing growth within the Planning Area and avoiding a range of adverse impacts to the aesthetics of the community. The Land Use Element, Circulation Element, Open Space/Conservation, and Recreation Element all contain Policies and Programs which help mitigate impacts associated with implementation of the General Plan. Specifically: Policy LU 2.3, Policy LU 2.4, Programs LU 2.4 – A & B, Policy 2.7, Programs 2.7 - A & B, Policy LU 8.1, Policy LU 8.5, Policy LU 8.6, Programs LU 8.6 – A through G, Policy LU 8.7, Policy LU 9.2, Policy LU 9.5, Policy LU 11.1, Objective LU 17, Policy LU 17.1, Programs LU 17.1 – A through C. Policy LU 17.2, Objective LU 21, Policy LU 21.1, Policy LU 21.2, Program LU 21.2 – A, Policy LU 22.1, Policy LU 22.2, Policy LU 22.3, Policy LU 22.4, Policy LU 22.5, Policy LU 22.6, Policy 23.1; Policy CI-9.4, Programs CI 9.4 A – C; Policy HZ 6.2, Program HZ 6.2 – A; Objective OCR 1, Policy OCR 1.1, Programs OCR 1.1 - A & B, Policy OCR 1.2, Programs OCR 1.3 - A, Policy OCR 3.1, Policy OCR 3.2, Objective OCR 4, Policy OCR 4.1, Objective OCR 5, Policy OCR 5.1, Policy OCR 5.3, Program OCR 5.3 – A, Policy OCR 5.4, Program OCR 5.4 – A, Objective OCR 6, Policy OCR 6.1, Objective OCR 7, Policy OCR 7.1, Policy OCR 7.2, Policy OCR 7.3, Programs OCR 7.3 – A and B, Policy OCR 7.4, Policy OCR 7.5, Policy OCR 7.7, Objective OCR 12, Policy OCR 12.2, Programs OCR 12.2 A – B, Objective OCR 16, Policy OCR 16.1

Level of Significance

Level of Significance After Mitigation

Less than Significant.

Mitigation Implementation and Monitoring Responsibility

Implementation: The City of Hanford Community Development Department through the Annexation, Subdivision Map, and project review processes shall be responsible for recommending findings of consistency with the General Plan. The Hanford Planning Commission and City Council are responsible for adopting such findings of consistency prior to project approval.

Monitoring: The various implementing departments of the City of Hanford are responsible for administering the City's Site Plan Review and Subdivision Ordinance processes. An application for a Certificate of Occupancy is required prior to completing a project. The conditions of approval are checked prior to issuing a Certificate of Occupancy.

4.2. AGRICULTURAL RESOURCES

4.2.1. Environmental Setting

The General Plan Area is located in the northeastern part of Kings County. Kings County is among the largest producing agricultural counties in California (ranked 12th of 58 counties) with a total of 617,030 acres in agricultural production.[1], Estimated gross crop value in 2000 exceeded $885 million. Table 4.2 - 1 lists Kings County's top 10 crops and the estimated 2000 dollar values.[2]

Table 4.2 - 1

Ten Leading Agricultural Commodities Produced In Kings County, 1992

Crop	Kings County 2000 Value
Milk	$293,313,000
Cotton	$232,100,000
Cattle and Calves	$62,617,000
Hay alfalfa	$33,928,000
Turkeys	$30,499,000
Wheat	$28,993,000
Tomatoes	$21,899,000
Peaches	$15,599,000
Corn Silage	$15,556,000
Grapes	$15,533,000

Source: King County Crop Report 2000

In comparison to the 1992 Kings County Crop Report, changes evident are increasing rank of Milk, cattle and calves in top valued crops. Also increasing in rank are hay/alfalfa, turkeys, wheat, and corn silage. Cotton remains high in the list while slipping in total annual value.

4.2.1.a Farmland Mapping and Monitoring Program

The Department of Conservation's Farmland Mapping and Monitoring Program was begun in 1980 to supplement the land Inventory and Monitoring activity of the USDA, Soil Conservation Service. For land inventory purposes, categorical definitions of important farmlands were developed by the Soil Conservation Service. These definitions recognize the land's suitability for agricultural production, rather than solely

[1] Source: Kings County Agricultural Crop Report 2000.
[2] Ibid.

reflecting the physical and chemical characteristics of soils. Lands which provide the best opportunity for agricultural production are designated as Prime Farmlands and Farmlands of Statewide Importance. Terms used in the Farmland Mapping and Monitoring Program are defined as follows:

Table 4.2 - 2

Description of Farmland Classifications

Farmland Category	Description
Prime (P)	Farmland with the best combination of physical and chemical features able to sustain long term production of agricultural crops. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for production of irrigated crops at some time during the two update cycles prior to the mapping date.
Statewide Importance (S)	Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for production of irrigated crops at some time during the two update cycles prior to the mapping date.
Unique (U)	Farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the two update cycles prior to the mapping date.
Local (L)	Land of importance to the local agricultural economy as determined by each County's Board of Supervisors and a local advisory committee. In Kings County this category is defined as lands that are presently under cultivation for small grain crops, but are not irrigated. Also lands that are currently irrigated pasture, but have the potential to be cultivated for row/field crop use.
Grazing (G)	Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres.
Urban & Built Up Land (U)	Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10 acre parcel.
Other (X)	Land which does not meet the criteria of any other category.
Water (W)	Water areas with an extent of at least 40 acres.

The State Department of Conservation, Division of Land Resources Protection publishes reports on the Farmland Mapping and Monitoring Program every two years. The last cycle was 1998 to 2000. This report for Kings County indicated that between the years 1998 to 2000, 695 acres of farmland was converted to urbanization.[3] Of that amount 225 was considered prime farmland and 52 acres of farmland of statewide

[3] California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, Table A-8, 1998-2000 Land Use Conservation for Kings County.

importance. During that same time, 772 acres were converted to prime farmland. The preponderance of that conversion comes from reclassifying grazing land. Also, farmland of statewide importance increased by 6,164 also primarily from the reclassification of grazing land within this two year period. This reclassification is due to new irrigated lands. Improvements to grazing land during the reporting period has increased the net amount of prime farmland in Kings County by 136 acres and farmland of statewide importance by 4,073 acres. This report lists 890,786 acres of mapped land in Kings County. 607,501 (68.2%) acres are cultivated and 238,301 (26.8%) acres are used for grazing. Urbanized land accounts for 28,939 (3.2%) acres.

Figure 4.2 - 1, Prime Farmland and Farmland of Statewide Importance illustrates the general location of Prime Farmland and Important Farmlands within the Planning Area. It is estimated that there are 4,310 acres of Prime Farmland and 4,950 acres of Farmland of Statewide Importance in the undeveloped portion of the Planning Area (outside the City of Hanford). Essentially the existing City is surrounded by predominately cultivated Prime and farmland of Statewide importance within the Planning Area. The Planning Area boundaries are the same as adopted in 1994 with the exception of the additional 125 acres at Highway 43 and Lacey Blvd. The City's General Plan proposes to convert 5,919 acres (includes 50% residential "market factor") to urban uses by 2025 and at full build-out 10,330 acres within the Planning Area. This increase would represent converting 0.9% of mapped cultivated agricultural land by the year 2025 and 1.7% of cultivated agricultural land at full build-out beyond the year 2025.

4.2.1.b Williamson Act Land

The California Land Conservation Act (Williamson Act) allows counties and cities to establish agricultural preserves as a mechanism to protect agricultural lands. Generally, as development approaches an agricultural area, the price of land is driven upward by owners and buyers speculating on the land's future development potential. An increase in the assessed value of the agricultural land and corresponding increase in taxes charged to the owners encourages the sale of agricultural land for development. Under the Williamson Act, the local jurisdiction and landowners agrees to continue agricultural activities for at least 10 years. In return, the local jurisdiction agrees to assess the property at its agricultural rather than market value. Termination of the Contract may be in initiated by either the property owner or the local jurisdiction. This is done through a notice-of-non-renewal process, which ends the landowner's Contract obligation to use the land for agricultural purposes, and allows it to be converted for development purposes.

Figure 4.2 - 2, Location of Williamson Act Lands illustrates the land currently under Williamson Act contract and lands which notices-of-renewal have been filed. The Planning Area contains approximately 3,545 acres of lands currently under contract within in the unincorporated territory of the Planning Area. Between 1994 and 2001, approximately 570 acres have filed for non-renewal of the contracts. These non-renewals reflect the recent annexation of land to the City and the proposed New Hanford High School/Learning Center on the westside of the Planning Area. A substantial amount of contract land is located just east of 13th Avenue and reinforces the long term nature of agriculture outside of the Planning Area.

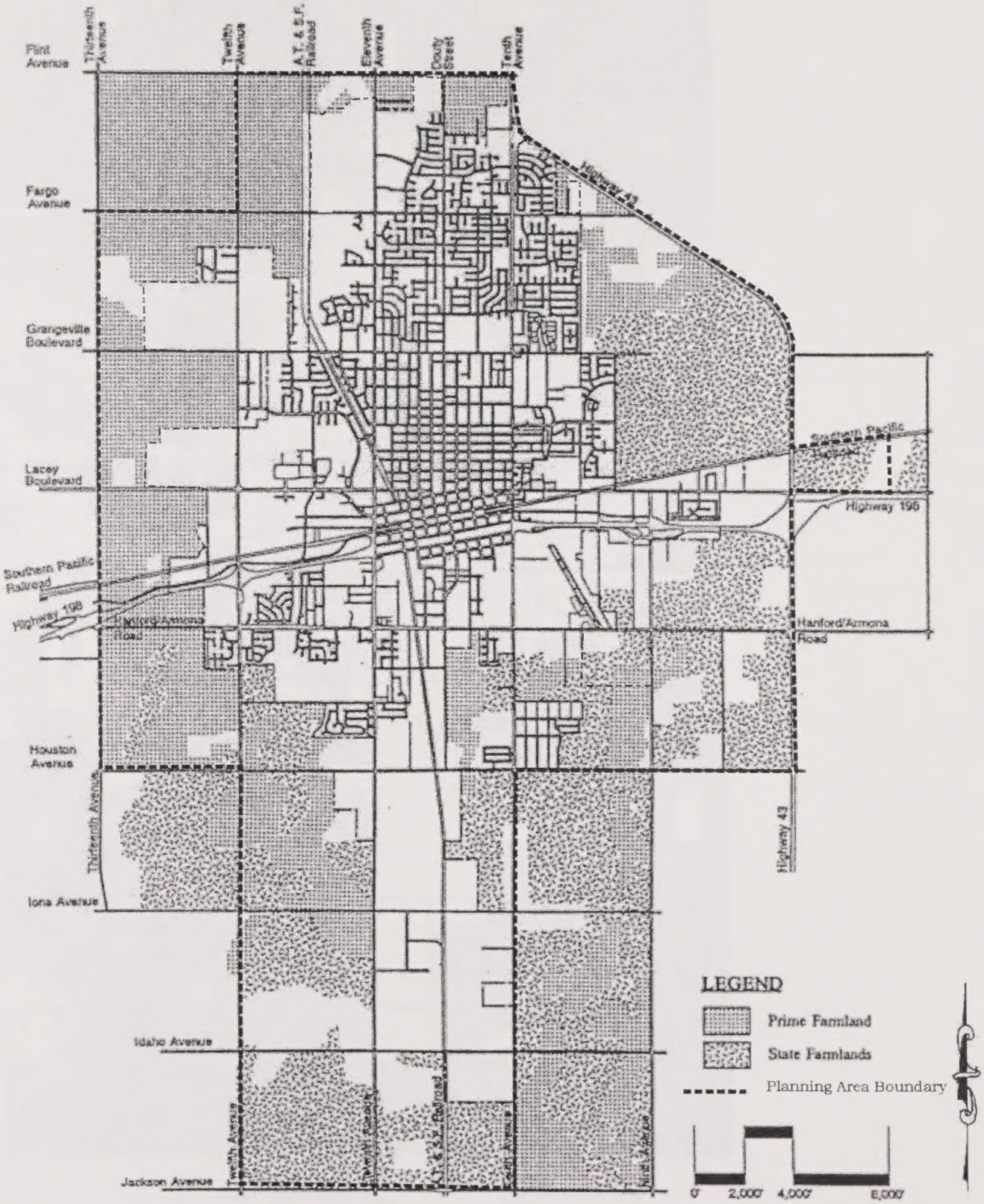
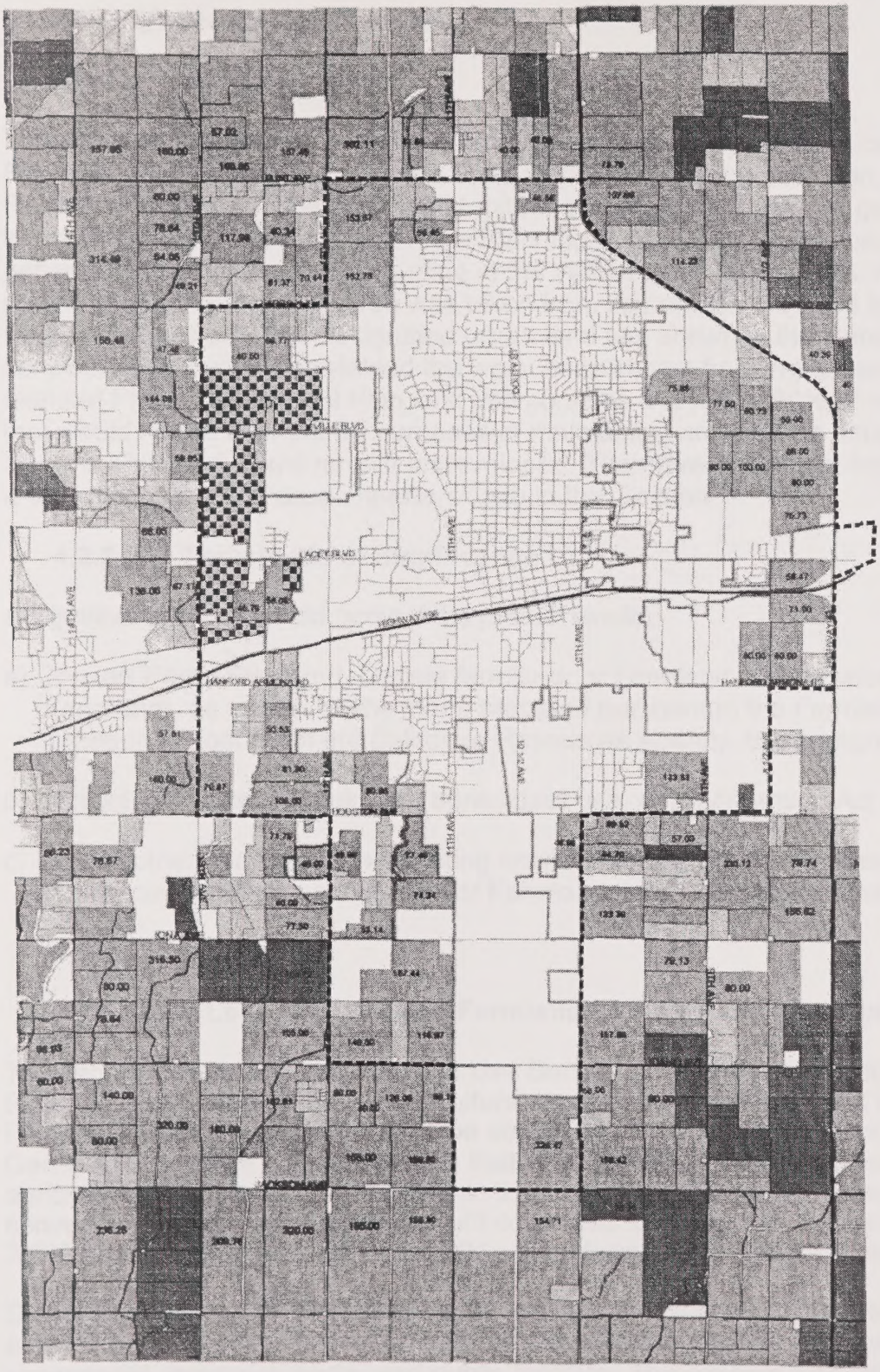


Figure 4.2- 1, Prime Farmland and Farmland of Statewide Importance



City of Hanford
Hanford Planning Area
Williamson Act Contract Non-Renewals
New Williamson Act Non-Renewals
Farmland Security Zone Parcels
Less than 40 acres
Equal or Greater than 40 acres

Figure 4.2- 2, Location of Williamson Act Contract Lands Within the Planning Area

4.2.2. Environmental Analysis

4.2.2.a Methodology

This analysis reviews the impacts to farmland generated by the build-out of the General Plan. Mapping of farmland from the State Department of Conservation, Division of Land Resource Protection, Mapping and Monitoring Program was used to generally locate various classes of farmland within the Planning Area. Kings County provided the general location of lands participating in the Williamson Act contracts. Acreage of urban growth within the Planning Area was taken from information provided by the Kings County GIS system. The designated urban land use shown in the General Plan was considered as built which yielded the worst case impact from implementation of the General Plan. The General Plan land use contains a factor of 50% of residential land that would not be built-out for purposes of maintaining competition between property owners. This land would remain undeveloped. Therefore, the actual impact to farmland is less than the worst case impacts shown in this Section.

4.2.2.b Thresholds of Significance

A significant impact would occur if the project would:

a) Convert Prime Farmland, Unique farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

4.2.2.c Impacts

4.2.2.c(1) Loss of Prime and Farmland of Statewide Importance

The vacant land analysis in the Land Use Section of this EIR estimated that there were 9,453 of vacant land (primarily agricultural land) in the unincorporated territory within the Planning Area that is anticipated to be converted to urban use at full build-out of the General Plan. Table 4.2 - 3 indicates that an estimated 2,709 acres would remain as an agricultural buffer or open space within the Planning Area and 6,551 acres would be converted to urban use. Of the amount converted to urban use, it is estimated that 3,260 will be prime farmland and 3,291 will be farmland of statewide importance.

During the build-out of the General Plan (through the year 2025) approximately 5,518 acres is forecasted to be needed for urban use. Urban use includes residential, commercial, industrial, parks, and public facilities. This amount also includes the 50% "market factor" of almost 1,346 acres that may remain in agriculture within the Planning Area. The remaining 4,172 acres is expected to be converted to urban use. The preponderance of prime farmland is located on the western side of the City with the next

intensive amount south of Highway 198. The eastside of the City contains the least amount of prime farmland. It is expected that the westside of the Planning Area will

Table 4.2 - 3

Estimated Farmland Converted to Urban Use at General Plan Build-Out

Type of Land	Acres of Unincorporated County Vacant Land	Acres to Urban Use	Acres to Remain in Ag/OS
Prime	4,310	3,260	1,050
Statewide	4,950	3,291	1,659
Subtotal	9,260	6,551	2,709
Other	193	193	0
Total	9,453	6,744	2,709

continue to develop because there is adequate sewer collection either constructed or capacity available for extension. The eastside of the Planning Area is not adequately served by sewer to allow for additional development. It is expected that the westside of the Planning Area will almost completely build-out before land will become available in the eastside of the Planning Area.

Within the western and southern portions of the Planning Area there is an estimated 2,860 acres of prime farmland and 1,180 acres of farmland of statewide importance. The remainder of 400 acres of Prime farmland and 2,111 of Statewide importance farmland are located in the eastern portion of the City.

Approximately 3,545 acres of land within the Planning Area are in Williamson Act contracts. In the City limits, approximately 87 acres of land remain under contract. Between 1994 and the end of 2001, property owners representing 567 acres filed for non-renewal. These non-renewals have occurred on the westside of the City between 12th Avenue and 13th Avenue and between Highway 198 and Fargo Avenue. This land was identified in the 1994 General Plan as a logical growth area and can be served by the City sewer system. The preponderance of land in the Planning Area under contract is located south of Highway 198. In the eastern portion of the Planning Area (north of Highway 198) an estimated 765 acres of land is in Williamson Act contracts. The western portion of the Planning Area (north of Highway 198) has about 835 acres under contract. See Table 4.2 - 4.

Full implementation of the General Plan (beyond 2025) would result in the eventual conversion of as much as 6,551 acres of Prime farmland and farmland of statewide importance to urban uses. These acres would be developed in various land uses including, open space, residential, schools, parks and public facilities, commercial, and industrial land. The overall conversion of 6,551 acres of agriculture land would be a significant impact. This determination is consistent with the California Environmental Quality Act (CEQA). In 1994 the City adopted a Statement of Overriding Considerations for the unavoidable significant impact on agricultural land.

Table 4.2 - 4

Land Under Williamson Contract within the Planning Area

Location of Contract Land	Estimated Acreage Currently Under Contract	Cancellation between 1994 and 2001
Westside north of Hwy 198	835	*567*
West and south of Hwy 198	1,945	0
Eastside north of Hwy 198	765	0
Total	3,545	567

Full implementation of the General Plan would result in the eventual conversion of as much as 6,551 acres of Prime farmland and farmland of statewide importance to urban uses. Total farmland consumed by 2025 is estimated at 5,518 acres (including a 50% residential market factor) and represents approximately 0.9% of cultivated land in Kings County and at full-build-out it is estimated that 1.7% of cultivated land in Kings County will be converted to urban use. While the percentage is small compared to the total acreage, the cumulative impact of consuming this resource is considered an irreversibly significant unavoidable environmental impact.

A total of 3,540 acres of Williamson Act lands would be converted to land uses other than agriculture and would result in a significant impact. The Williamson Act contracts would have to expire from non-renewal or be cancelled prior to development being approved by the City.

A secondary effect of developing the estimated 5,518 acres (2025 horizon) of urban land is the potential for land use conflicts. Encroachment of urban uses into an area that is under agricultural production can prevent farmers from carrying out many of their normal farming practices (e.g., pesticide application). Farming practices that generate large amounts of dust, high levels of noise, or offensive odors may have to be reduced or curtailed due to complaints by adjacent residents. Further, state requirements restrict application of chemicals to fields when persons live in close proximity. In addition, farming operations can also experience vandalism, theft and nuisance activities from neighboring residents. The City has recently adopted a "right to farm" Ordinance patterned after the Ordinance in effect in Kings County.

Urbanization of agricultural land can also have an economic impact on the local economy because land taken out of production reduces the amount of money that flows into the local economy from agriculture. The report *Risks, Challenges and Opportunities: Agriculture, Resources and Growth in a Changing Central Valley* prepared by the American farmland Trust, indicated that for every one dollar of farm sales four dollars of farm-related activity occurred. For example, removal of 5,518 acres of field crops from production could lead to the loss of between four and five million dollars annually in the local agricultural economy. With a multiplier factor of four, these figures would increase to $16 to $20 million annually. This example is based on the field

crop being lint cotton, an average yield of 1,290 pounds per acre and an average price of $.62 per pound.[4] The calculated annual yield is $2,400 per acre using the multiplier factor.

Off setting the loss in the agricultural segment of the local economy, is the diversification of the local economy with jobs and economic impacts in the retail sales, industrial, and public service sector in the City. Similar to the range of value per acre in agricultural crops, the range of value for commercial, industrial, public service sector, and residential varies. All things being equal, the measurement of economic productivity for urban areas is per capita sales tax. As population grows in an economically balanced community, the per capita sales tax may remain relatively constant while the total amount of sales tax increases reflecting the community's growth and productivity. Assuming the current per capita sales tax $127.80[5] remains constant the anticipated generation of additional annual revenue from the City's growth to the year 2025 is estimated at $73 million. In comparison to agricultural revenue of about $2,400 per acre, the urban revenue production is about $94,255 per acre. While conversion of the agricultural land reduces overall productivity of food and fiber, urbanization promotes economic diversity and increases overall revenue production on a per acre basis.

4.2.2.c(2) Land Use Conflicts

In addition to the loss of Prime, Statewide Importance, and Williamson Act agricultural contract lands, conflicts may result between agriculture and urban uses. Local agricultural operations are often associated with impacts related to aerial and ground application of pesticides, noise and airborne dust emissions that occur during tilling or harvesting, flies and other pests, and unpleasant odors. Urban encroachment into agricultural areas may generate a demand for restrictions, which may significantly impact agricultural operations. For example, farmers may be required to use alternative pesticides which might not be as effective at controlling pests and could be more costly than pesticides currently being applied. Additional restrictions of agricultural activities may subsequently increase the cost of production, and lead to further declines in the economic viability of local farming operations at the edge of the City.

It is likely that the negative impacts of the urban-rural interface may be mitigated through appropriate land use planning on both sides of the interface. For the most part the General Plan Land Use Element provides a very low density residential land use, separating major roads from adjacent agricultural uses. Within urban areas, light industrial warehouse, fleet parking, and storage are the least sensitive to agricultural land use impacts. This distance and density will reduce, but not eliminate conflicts if intensive agriculture is nearby. The General Plan contains policies that promote compact development on the City's fringe and does not promote leap frog development into agricultural land. The County General Plan provides for a Limited Agricultural designation, 20 acre minimum lot sizes in land use around the City. This relatively small size lot may help to avoid large scale agricultural operations, but will not ensure that conflicts will not occur.

---

[4] Based on values obtained from the Kings County Crop Report 2000
[5] Personal communication with Tom Dibble, Finance Director, City of Hanford.

Consistent with the recommendations of the Kings County General Plan, the City has adopted a Right to-Farm Ordinance as a mitigation measure for the loss of agricultural land in the County.

Local right-to-farm ordinances act to preserve existing farms and protect framing operations against the result of land use conflicts which result from complaints from neighboring urban land uses. To protect farmers from these situations, the California Legislature, along with other states, have passed right-to-farm laws, including the Thurman Act. In response to the Thurman Act, the Legislature reviews actions based on 13 factors, including productive agricultural land.

Right-to-farm ordinances typically require notification to prospective home buyers of potential nuisances, such as odors, dust, flies and noise, which may be associated with nearby agricultural operations. Right-to-farm ordinances may be successful in relieving some pressures on farmers from their neighbors, but generally do not address issues of trespass, vandalism, or increasing government regulation. More importantly, right-to-farm ordinances do not remove the influence of inflated land values on farmers' expectations and desires to continue farming.

Another approach to farmland impact mitigation is the Transfer of Development Rights. Transfer of Development Rights (TDR) programs attempt to preserve agricultural land and to direct urban or non-farm development to specific locations. A typical TDR program establishes both a preservation district and a development district. Development rights are assigned for all properties in the preservation district. Agricultural landowners in the preservation district may not develop their property, but are allowed to sell their development rights to landowners in designated development districts. The developers in development districts are encouraged to participate in the program by the offer of a density bonus, which allows development at a higher density than current zoning, and thus increases the developer's profit. The public pays only for the administration of the TDR program.

Transfer of development rights are less manageable due to the difficulty in determining the transfer value of development rights, and because development pressures and timing must coincide with acquisition funding needs.

For a TDR program to work effectively, the government jurisdiction must make available a development district that is fully serviced and subject to strong development pressures. Some facilitation of the transfer or rights between buyers and seller is necessary, because the technique is not widely known and could prove confusing.

Although these techniques may help lessen the impacts associated with conflicts between urban and agriculture issues, the overall loss of agriculture land would result in a significant impact.

4.2.2.c(3) Regional Impacts

Increased urbanization within Kings County is expected to increase as communities attempt to broaden the overall economic base and provide a range of job opportunities. While urban areas have increased in size over the years, the amount of agricultural land

in production both expanded and contracted based on the data assembly in the Farmland Mapping and Monitoring Program. Kings County Agricultural Crop Report describes an increase in production as crops shift to meet market fluctuations and new growth areas (milk, cattle, and feed for example).

Assuming that the amount of farmland contained in the Farmland Mapping and Monitoring Program remains constant, full build-out of the General Plan to the limits of the Planning Area (9,453 of agricultural land converted), it would increase the amount of agricultural land used for urban purposes within the County from 3.2% (28,939 acres) to 4.4% (39,392 acres).

In 1994 the City's General Plan defined a Planning Area that would accommodate growth of the City at a reasonable growth rate into the future. That Planning Area boundary remains the same (with the exception of the additional 125 acres) in this General Plan Update. The analysis in the Land Use Section of this EIR indicates that the capacity of the Planning Area exceeds the 2025 population projections. Because land normally has greater economic value in urban use than in farm use, land prices in urbanizing areas increase above their value for agricultural production. High land values encourage farmers to hold on to farmland for its development potential rather than as farmland. The preservation of remaining farmland resources adjacent to and surrounding the urbanizing area within the Planning Area becomes increasingly difficult. The City has attempted to stem speculation of farmland for urban purposes outside of the Planning Area by adopting and enforcing General Plan and development policies that limit the ability of public infrastructure to expand beyond the Planning Area boundaries. This policy construct is meant to maintain agriculture surrounding the Planning Area. Nevertheless, as first noted in the 1994 General Plan EIR, the conversion of agricultural land within the Planning Area would result in the loss of agricultural land in Kings County and the resultant decline in crop production and an increase in conflicts between urban/rural uses. The City of Hanford has purchased 1,600 acres of agricultural land south of the Planning Area. This land will be maintained in perpetual agricultural production using treated wastewater as the source of irrigation supply. This acquisition is a substantial amount of land and should be considered as part of the mitigation for agricultural impacts within the Planning Area.

The conversion of agricultural land at the cumulative level is an unavoidable and significant impact. Policies and Actions may lessen the degree of impact, but not reverse urban development trends and their effects on agricultural production.

4.2.2.d Mitigation Measures

The General Plan Land Use, Open Space/Conservation, and Recreation Element, and the Public Facilities Element contains Policies and Programs which help mitigate impacts on agricultural resources associated with implementation of the General Plan, particularly growth management policies. Specifically: Policy LU 1.2, Policy LU 2.2, Policy 2.3, Policy LU 2.4, Programs LU 2.4 - A & B, Policy LU 8.1, Programs LU 8.1 - A, B & D, Policy LU 8.2, Program LU 8.2 - A & B, Objective LU 21, Policy LU 21.1, Policy LU 21.2, Program LU 21.2 – A, Policy LU 23.1: Objective OCR 1, Policy OCR 1.1, Programs OCR 1.1 - A & B, Policy OCR 1.2, Programs OCR 1.3 – A & B, Objective

OCR 6, Policy OCR 6.1; Policy PF 1.3, Policy PF 1.4, Programs PF 1.4 – A & B. Policy PF 4.2, Policy PF 4.3, Program PF 4.3 – A.

Level of Significance After Mitigation

A total of 3,260 acres of Prime Agriculture and 3,291 acres of Statewide Importance within the Planning Area would be converted to non-agriculture land use resulting in a significant impact. Approximately 3,545 acres of land within the Planning Area are in Williamson Act contracts and are eventually expected to be converted to non-agriculture land uses resulting in a significant impact. The General Plan proposes policies and objectives, which help alleviate impacts associated with conversion of agriculture land. Although implementation of General Plan Goals, Policies and Objectives help mitigate impacts the effects of the loss of agricultural land, such loss is considered an cumulatively significant unavoidable impact.

Mitigation Implementation and Monitoring Responsibility

Implementation: The City of Hanford Community Development Department through the Annexation, Subdivision Map, and project review processes shall be responsible for recommending findings of consistency with the General Plan. The Hanford Planning Commission and City Council are responsible for adopting such findings of consistency prior to project approval.

Monitoring: The various implementing departments of the City of Hanford are responsible for administering the City's Site Plan Review and Subdivision Ordinance processes. An application for a Certificate of Occupancy is required prior to completing a project. The conditions of approval are checked prior to issuing a Certificate of Occupancy.

4.3. AIR QUALITY

4.3.1. Environmental Setting

In the process of developing the 1994 General Plan, the City of Hanford consulted the Air Quality Guidelines for General Plan published by the San Joaquin Valley Air Pollution Control District (1994). The City responded to the guidance by including specific Objectives, Policies and Programs that address air quality issues throughout the General Plan. Each Objective, Policy, or Program that supports improving air quality in Hanford is designated with an (AQ) suffix. A complete listing is provided as Appendix B to the General Plan.

The land use design, circulation system, circulation, and open space and conservation elements of the Hanford General Plan emphasizes public transit accessibility, pedestrian facilities, and bicycling as a recreational activity.

4.3.1.a Topography and Climate

Introduction

The California Air Resources Board (ARB) has divided California into regional air basins according to topographic air drainage features. The San Joaquin Valley Air Basin (SJVAB), which is approximately 250 miles long and averages 35 miles wide, is the second largest air basin in the state. Air pollution is directly related to a region's topographic features. The SJVAB is defined by the Sierra Nevada mountains in the east (8,000 to 14,000 feet in elevation), the Coast Ranges in the west (averaging 3,000 feet in elevation), and the Tehachapi mountains in the south (6,000 to 8,000 feet in elevation). The valley is basically flat with a slight downward gradient to the northwest. The valley opens to the sea at the Carquinez Straits where the San Joaquin-Sacramento Delta empties into San Francisco Bay. The San Joaquin Valley (SJV), thus, could be considered a "bowl" open only to the north.

Although marine air generally flows into the basin from the San Joaquin River Delta, the region's topographic features restrict air movement through and out of the basin. The Coastal Range hinders wind access into the SJV from the west, the Tehachapi's prevent southerly passage of airflow, and the high Sierra Nevada range is a significant barrier to the east. These topographic features result in weak airflow, which becomes blocked vertically by high barometric pressure over the SJV. As a result, the SJVAB is highly susceptible to pollutant accumulation over time. Most of the surrounding mountains are above the normal height of summer inversion layers (1,500-3,000 feet).

Local climatological effects, including wind speed and direction, temperature, inversion layers, and precipitation and fog, can exacerbate the air quality problem in the SJVAB. These factors are described below:

4.3.1.a(1) Wind Speed and Direction

Wind speed and direction play an important role in dispersion and transport of air pollutants. Wind at the surface and aloft can disperse pollution by mixing vertically and by transporting it to other locations. Ozone is classified as a "regional" pollutant in part because of the time required for ozone formation. Ozone precursors can be transported well away from the source area before ozone concentrations peak. Respirable particulate matter (PM-10) is also considered a regional pollutant in part because of its tendency to remain suspended in the air over long periods of time. Some other primary pollutants, for example, carbon monoxide (CO), are classified as "localized" pollutants in part because they tend to dissipate easily and therefore may form high concentrations when wind speed is low.

During the summer, wind speed and direction data indicate that summer wind usually originates at the north end of the SJV and flows in a south-southeasterly direction through the SJV, through Tehachapi pass, into the Southeast Desert Air Basin.

During the winter, wind speed and direction data indicate that wind occasionally originates from the south end of the SJV and flows in a north-northwesterly direction. Also during the winter months, the SJV experiences light, variable winds, less than 10 mph. Low wind speeds, combined with low inversion layers in the winter, create a climate conducive to high CO and PM-10 concentrations.

Superimposed on this seasonal regime is the diurnal wind cycle. In the SJV, this cycle takes the form of a combination of sea breeze-land breeze and mountain-valley regimes. The sea breeze-land breeze regime has a sea breeze flowing into the SJV from the north during the day and a land breeze flowing out of the SJV at night. The mountain-valley regime has an upslope (mountain) flow during the day and a downslope (valley) flow at night. These phenomena add to the complexity of regional wind flow and pollutant transport within the SJVAB.

4.3.1.a(2) Temperature

Temperature and solar radiation are particularly important in the chemistry of ozone formation. Ozone is formed in a photochemical reaction requiring sunlight. Generally, the higher the temperature, the more ozone formed, since reaction rates increase with temperature. However, extremely hot temperatures can "lift" or "break" the inversion layer. Typically, if the inversion layer doesn't lift to allow the build up of contaminants to be dispersed into the Southeast Desert, the ozone levels will peak in the late afternoon, sometimes as late as 3 to 7 p.m. If the inversion layer breaks and the resultant afternoon winds occur, the ozone will peak in the early afternoon and decrease in the late afternoon as the contaminants are transported to the Southeast Desert. Temperature is not as important to formation of high CO or PM-10 levels.

The SJVAB has an "inland Mediterranean" climate averaging over 260 sunny days per year. The valley floor is characterized by warm, dry summers and cooler winters. Summer high temperatures often exceed 100°F, averaging in the low 90s in the

northern valley and high 90s in the south. In the entire SJV, high daily temperature readings in summer average 95°F. Over the last 30 years, the SJV averaged 106 days a year 90°F or hotter, and 40 days a year 100°F or hotter. The daily summer temperature variation can be as high as 30°F.

In winter, as the cyclonic storm track moves southward, the storm systems moving in from the Pacific Ocean bring a decidedly maritime influence to the SJV. The high mountains to the east prevent the cold, continental air masses of the interior from influencing the valley. Thus, winters are mild and humid. Temperatures below freezing are unusual. Average high temperatures in the winter are in the 50's, but highs in the 30s and 40s can occur on days with persistent fog and low cloudiness. The average daily low temperature is 45°F.

4.3.1.a(3) Temperature Inversions

The vertical dispersion of air pollutants in the SJV is limited by the presence of persistent temperature inversions. Because of expansional cooling of the atmosphere, air temperature usually decreases with altitude. A reversal of this atmospheric state, where the air temperature increases with height, is termed an inversion. Figure 4.3 - 1, Temperature Inversion Graphic depicts a typical temperature inversion. Inversions can exist at the surface, or at any height above the ground. The height of the base of the inversion is known as the "mixing height". This is the level to which pollutants can mix vertically. Semi-permanent systems of high barometric pressure fronts frequently establish themselves over the SJVAB, deflecting low-pressure systems that might otherwise bring cleansing rain and winds.

Air above and below the inversion base does not mix because of differences in air density. Warm air above the inversion is less dense than below the base. The inversion base represents an abrupt density change where little exchange of air occurs. This phenomenon is similar to that of the abrupt density change that separates skim and whole milk. Inversion layers are significant in determining ozone formation and CO and PM-10 concentrations. Ozone and its precursors will mix and react to produce higher concentrations under an inversion, and inversions trap and hold directly emitted pollutants like CO. PM-10 is both directly emitted and created in the atmosphere as a chemical reaction. Concentration levels are directly related to inversion layers due to the limitation of mixing space. There are two principal types of inversions that occur in the SJV: a surface or radiation inversion, and a subsidence inversion.

Surface inversions are formed when the ground surface becomes cooler than the air above it during the night. The earth's surface goes through a radiative process on clear nights, where heat energy is transferred from the ground to a cooler night sky. As the earth's surface cools during the evening hours, the air directly above it also cools, while air higher up remains relatively warm. The inversion is destroyed when heat from the sun warms the ground, which in turn heats the lower layers of air: this heating stimulates the ground-level air to float up through the inversion layer. Daytime temperature inversions during the summer are usually encountered 2,000 to 2,500 feet above the valley floor. Inversions are more persistent (stable) during the winter months.

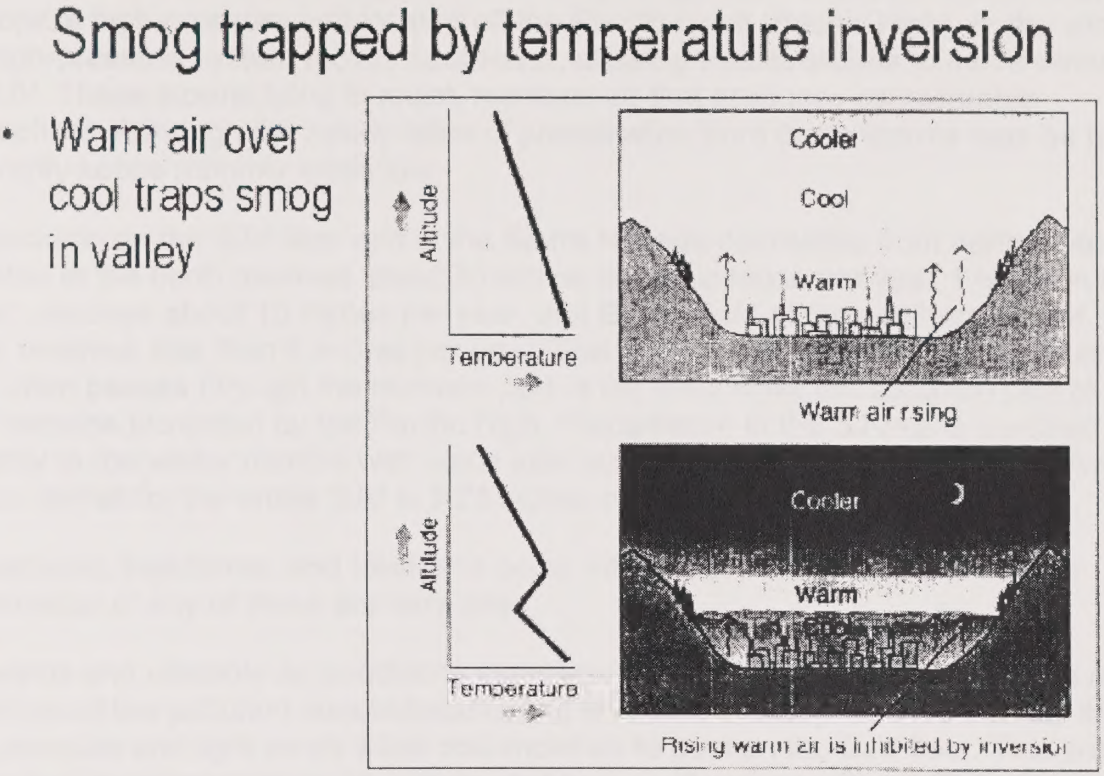


Figure 4.3 - 1, Temperature Inversion Graphic

The daily cycle has overnight inversions occurring 500 to 1000 feet above the valley floor. Studies in the southern part of the Valley indicate more frequent and persistent daytime radiation inversions than in the north due to the lack of marine air intrusion

Subsidence inversions occur as air is pushed downward by some mechanism, such as the movement of air over mountain ranges, or by differential pressure changes in the atmosphere. As this air moves downward, its pressure increases, causing its temperature to increase. The warm layer of air created by this phenomenon will descend to some relatively static elevation above the ground, creating a low inversion layer. This type of inversion is quite persistent, since heat from the ground does not reach the inversion base to break it up. This is common in high-pressure areas along the coast.

4.3.1.a (4) Precipitation and Fog

Precipitation and fog tend to reduce or limit some pollutant concentrations. Ozone needs sunlight for its formation, and clouds and fog block the required radiation. CO is slightly water-soluble so precipitation and fog tends to "reduce" CO concentrations in the atmosphere. PM-10 is somewhat "washed" from the atmosphere with precipitation.

Precipitation in the SJV is strongly influenced by the position of the semi-permanent subtropical high-pressure belt located off the Pacific coast (Pacific High). In the winter, this high-pressure system moves southward, allowing Pacific storms to move through the SJV. These storms bring in moist, maritime air that produces considerable atmosphere. Although the hourly rates of precipitation from these storms may be high, their rarity keeps monthly totals low.

Precipitation on the SJV floor and in the Sierra Nevada decreases from north to south. Stockton in the north receives about 20 inches of precipitation per year, Fresno in the center, receives about 10 inches per year, and Bakersfield at the southern end of the valley receives less than 6 inches per year. This is primarily because the Pacific storm track often passes through the northern part of the state while the southern part of the state remains protected by the Pacific High. Precipitation in the SJVAB is confined primarily to the winter months with some also occurring in late summer and fall. Average annual rainfall for the entire SJV is *9.25* inches on the SJV floor.

Snowstorms, hailstorms, and icestorms occur infrequently in the SJV and severe occurrences of any of these are very rare.

The winds and unstable air conditions experienced during the passage of storms result in periods of low pollutant concentrations and excellent visibility. Between winter storms, high pressure and light winds allow cold moist air to pool on the SJV floor. This creates strong low-level temperature inversions and very stable air conditions. This situation leads to the SJV's famous Tule Fogs. The formation of natural fog is caused by local cooling of the atmosphere until it is saturated (dew point temperature). This type of fog, known as radiation fog is more likely to occur inland. Cooling may also be accomplished by heat radiation losses or by horizontal movement of a mass of air over a colder surface. This second type of fog, known as advection fog, generally occurs along the coast.

Conditions favorable to fog formation are also conditions favorable to high concentrations of CO and PM-10. Ozone levels are low during these periods because of the lack of sunlight to drive the photochemical reaction. Maximum CO concentrations tend to occur on clear, cold nights when a strong surface inversion is present and large numbers of fireplaces are in use. A secondary peak in CO concentrations occurs during morning commute hours when a large number of motorists are on the road and the surface inversion has not yet broken.

The water droplets in fog, however, can act as a sink for CO and nitrogen oxides Nox lowering pollutant concentrations. At the same time, fog could help in the formation of secondary particulates such as ammonium sulfate. These secondary particulates are believed to be a significant contributor of winter season violations of the PM-10 and PM-2.5 standards.

4.3.1.b Air Quality Regulations

Introduction

All levels of government have some responsibility for protecting air quality. This section outlines the responsibilities of federal, state, regional, and local government agencies in air quality matters and attempts to explain how they interact.

Federal

At the federal level, the Environmental Protection Agency (EPA) has been charged with implementing national air quality programs. The EPA's air quality mandates are drawn primarily from the Federal Clean Air Act (FCAA). The predecessor to the FCAA was the Federal Air Pollution Control Act (FAPCA), which was enacted in 1955. It empowered the Secretary of Health, Education, & Welfare (HEW) to work for a better understanding of air pollution causes and effects. The first FCAA was enacted in 1963 and empowered the HEW to define air quality criteria. The FCAA was amended in 1970. With this amendment, the President decided to establish an autonomous regulatory body to oversee the enforcement of environmental policy. Thus, the EPA was created from portions of three federal Departments, three Bureaus, three Administrations, two Councils, one Commission, one Service, and many diverse offices. The FCAA was again substantially amended in 1977 and again in 1990.

The EPA deals with global, international, national, and interstate air pollution issues. Its primary role at the state level is one of oversight of state air quality programs. The EPA sets federal vehicle and stationary source emission standards and provides research and guidance in air pollution programs.

The FCAA required the EPA to set National Ambient Air Quality Standards (NAAQS) for several problem air pollutants on the basis of human health and welfare criteria. Two types of NAAQS have been established: primary standards, which protect public health, and secondary standards, which protect the public welfare from non-health-related adverse effects such as visibility reduction. Primary NAAQS were established for the following "criteria" air pollutants (so called because they were established on the basis of health criteria):

- carbon monoxide (CO);
- ozone;
- PM-l0;
- PM-2.5;
- nitrogen dioxide (NO_2);
- sulfur dioxide (SO_2); and
- lead.

The primary NAAQS standards are intended to protect, with an adequate margin of safety, those persons most susceptible to respiratory distress, such as people suffering from asthma or other illness, the elderly, very young children, or others engaged in strenuous work or exercise. Table 4.3 - 1 presents the NAAQSs.

Table 4.3 - 1

National and California Ambient Air Quality Standards

Air Pollutant	Average Time	Units[1]	Standards[2]	
			CAAQS3	NAAQS[4]
Ozone (O_3)	8 hour[5]	ppm	--	0.08
	1 hour[6]	ppm	0.09	0.12
Carbon Monoxide (CO)	8 hour	ppm	9.0	9
	1 hour	ppm	20	35
Nitrogen Dioxide (NO_2)	Annual Average	ppm	--	0.053
	1 hour	ppm	0.25	--
Sulfur Dioxide (SO_2)	Annual Average	ppm	--	0.03
	24 hours	ppm	0.04	0.14
	1 hour	ppm	0.25	--
Fine Particulate Mater (PM-2.5)[7]	Annual Average[8]	g/m^3	--	15
	24 hours[9]	g/m^3	--	65
Respirable Particulate Matter (PM-10)	Annual	g/m^3	30[11]	50[12]
	24 hours[10]	g/m^3	50	150
Lead (Pb)	30 Day Average	g/m^3	1.5	--
	Calendar Quarter	g/m^3	--	1.5
Sulfates (SOx)	24 hour	g/m^3	25	--
Visibility Reducing Particulates (VSP)	8 hour	--	[13]	--
Vinyl Chloride (Chloroethane)	24 hour	ppm	0.010	--
Hydrogen Sulfide (H_2S)	1 hour	ppm	0.03	--

Sources: California Air Resources Board, Facts About Air Quality and 62 FR 38421 (Presidential Executive Order, dated July 16.1997)

Notes:

1 Concentration expressed in the following units: ppm refers to parts per million by volume and pg/m^3 is micrograms per cubic meter.

2 Only the primary standards are established to protect the public health and are the most stringent federal standards

3 California standards for ozone. CO $S0_2$ (1-hour averaging period), $N0_2$, and PM-10 are not to be exceeded.

4 National standards (other than ozone, PM, and those based on annual averages or annual arithmetic means) are not to be exceeded more than once per year.

5 The 8-hour standard is presented her for information purposes only. The Standard is established but implementation criteria are still to be determined at this time. The federal standard will be evaluated on the 4th highest (daily maximum)

8-hour average per year, averaged over 3 years.

6 The federal 1-hour standard will be attained when the 4th highest (daily maximum) 1-hour average per year, averaged over 3 years, is equal to or less than the standard. Once attained this standard will no longer be in effect.

7 The PM-2.5 standard is presented here for information purposes only Implementation is in the data-gathering phase.

8 The annual standard will be met when the 3-year average of the annual arithmetic mean PM-2.5 concentration is less than or equal to 15 pg/m^3.

9 The 24-hour standard will be met when the 3-year average of the 98th percentile of 24-hour PM-2. 5 concentration is less than or equal to 65 pg/m^3.

10 The 24-hour standard is attained when 99 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

11 The state PM-JO annual standard is attained when the expected annual geometric mean concentration is less than or equal to 30 pg/m^3.

12 The federal PM-10 annual standard is attained when the expected annual arithmetic mean concentration is less than or equal to 50 pg/m^3.

13 In sufficient amount to produce an extinction coefficient of 0.23 per kilometer due to particles when the relative humidity is less than 70 percent.

The FCAA required each state to prepare an air quality control plan referred to as the State Implementation Plan (SIP). The Federal Clean Air Act Amendments of 1990 (FCAAA) added requirements for states containing areas that violate the NAAQS to revise their SIP's to incorporate additional control measures to reduce air pollution. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The EPA has responsibility to review all state SIP's to determine if they conform with the mandates of the FCAAA and will achieve air quality goals when implemented. If the EPA determines a SIP to be inadequate, it may prepare a Federal Implementation Plan (FIP) for the nonattainment area and may impose additional control measures. Failure to submit an approvable SIP or to implement the plan within mandated timeframes can result in sanctions being applied to transportation funding and stationary air pollution sources in the air basin.

State

The California Air Resources Board (ARB) is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing its own air quality legislation called the California Clean Air Act (CCAA), adopted in 1988. The ARB was created in 1967 from the merging of the California Motor Vehicle Pollution Control Board and the Bureau of Air Sanitation and its Laboratory.

The ARB has primary responsibility in California to develop and implement air pollution control plans designed to achieve and maintain the NAAQS established by the EPA. Whereas the ARB has primary responsibility and produces a major part of the SIP for pollution sources that are statewide in scope, it relies on the local air districts to provide

additional strategies for sources under their jurisdiction. The ARB combines its data with all local district data and submits the completed SIP to the EPA. The SIP consists of the emissions standards for vehicular sources and consumer products set by the ARB, and attainment plans adopted by the APCDs and AQMDs and approved by the ARB.

States may establish their own standards, provided the state standards are at least as stringent as the NAAQS. California has established California Ambient Air Quality Standards (CAAQS) pursuant to California Health and Safety Code (CH&SC) [§39606(b)] and its predecessor statutes. Table 4.3 - 1 also presents the CAAQSs.

The CH&SC [§39608] requires the ARB to "identify" and "classic" each air basin in the state on a pollutant-by-pollutant basis. Subsequently, the ARB designated areas in California as nonattainment based on violations of the CAAQSs. Designations and classifications specific to the SJVAB can be found in the next section of this document. Areas in the state were also classified based on severity of air pollution problems. For each nonattainment class, the CCAA specifies air quality management strategies that must be adopted. For all nonattainment categories, attainment plans are required to demonstrate a five-percent-per-year reduction in nonattainment air pollutants or their precursors, averaged every consecutive three-year period, unless an approved alternative measure of progress is developed. In addition, air districts in violation of CAAQS are required to prepare an Air Quality Attainment Plan (AQAP) that lays out a program to attain and maintain the CCAA mandates.

Other ARB duties include monitoring air quality. The ARB has established and maintains, in conjunction with local air pollution control districts (APCDs) and air quality management districts, a network of sampling stations (called the State and Local Air Monitoring [SLAMS] network), that monitor what the pollutants levels are actually present in the ambient air. Table 4.3 - 2 presents a list of monitoring stations active in the SJVAB as of the writing of this document. In addition, Table 4.3 - 2 also indicates which pollutants are monitored and the agency responsible for site operations. The SJVAPCD and ARB add and change monitoring station capability on an ongoing basis. Consult with the ARB web site for the most recent monitoring information.

Table 4.3 - 2

Current Ambient Air Monitoring Stations in the SJV

Kings County Sites	0_3	PM-10	PM-2.5	CO	NO_2	SO_2	H_2S	Agency
City of Hanford	X	X			X			SJVAPCD

Source: Guide for Assessing and Mitigating Air Quality Impacts, SJVAPCD, 1-10-02

ARB also sets emissions standards for new motor vehicles, consumer products, small utility engines, and off-road vehicles. In many cases, California standards are the toughest in the nation.

Regional

State law recognized that air pollution does not respect political boundaries and therefore required the ARB to divide the state into separate air basins that each have similar geographical and meteorological conditions [CH&SC §39606(a)]. Originally, air pollution was regulated separately by county APCDs. Although this is still the practice in most counties in California, many county agencies began to realize that air quality problems are best managed on a regional basis and began to combine their regulatory agencies into regional agencies. This was the case for the SJV, where until 1991, each county operated a local APCD.

Air districts have the primary responsibility for control of air pollution from all sources other than emissions directly from motor vehicles, which are the responsibility of the ARB and the EPA. Air districts adopt and enforce rules and regulations to achieve state and federal ambient air quality standards and enforce applicable state and federal law.

Currently, the San Joaquin Valley Air Pollution Control District (SJVAPCD) has jurisdiction over air quality matters in the SJVAB. The SJVAPCD was formed in 1991. Its headquarters are located in Fresno with regional offices located in Bakersfield in the Southern Region and Modesto in the Northern Region. Note that the eastern portion of Kern County falls outside the SJVAB and is within the Southeast Desert Air Basin and is under another local air pollution control district's (Kern County Air Pollution Control District) jurisdiction.

4.3.1.c Air Quality Plans

The SJVAPCD has adopted several attainment plans to achieve state and federal air quality standards to comply with CCAA and FCAAA requirements. The SJVAPCD must continuously monitor its progress in implementing attainment plans and must periodically report to the ARB and the EPA. It must also periodically revise its attainment plans to reflect new conditions and requirements in accordance with schedules mandated by the CCAA and FCAAA.

The CCAA requires districts to adopt air quality attainment plans and to review and revise their plans to address deficiencies in interim measures of progress once every three years. The SJVAPCD's *Air Quality Attainment Plan* was adopted in 1991 and most recently updated in 2001.

To meet FCAAA and CCAA requirements, the SJVAPCD has submitted numerous plans for attaining ozone, PM-10 and carbon monoxide standards. The current applicable plans and their purposes are shown on Table 4.3 - 3. All air quality plans are available for purchase from the SJVAPCD District Headquarters office in Fresno. The most current plans meeting FCAAA requirements can be downloaded from the SJVAPCD web site. The ozone plan projected attainment of the federal ozone standard by 1999, but did not achieve its goal. The EPA has officially redesignated the SJVAB to severe nonattainment for ozone effective December 10, 2001 with a May 31, 2002 deadline for plan submittal. The carbon monoxide plan demonstrates that CO

attainment has already been reached. The PM-10 attainment plan sets forth the approach the SJVAPCD will use to attain the NAAQS for PM- 10. The 1997 PM- 10 Attainment Demonstration Plan has not been approved by EPA to date and the SJVAPCD expects that EPA will disapprove the plan in the next few months triggering the need for a new plan submittal. Since the FCAAA PM-10 attainment deadline for areas classified as serious (December 31, 2001) has passed, the SJVAPCD will be required to submit a new plan by December 31, 2002.

Table 4.3 - 3

SJVAPCD Air Quality Plans

SJVAPCD Plan	Plan Purpose
1991 Air Quality Attainment Plan for the San Joaquin Valley, January 30, 1992.	Establishes the regulatory groundwork in order to bring the SJVAB into compliance with the CAAQS for ozone and CO.
1992 Federal Attainment Plan for Carbon Monoxide	Establishes the regulatory groundwork in order to bring the SJVAB into compliance with the NAAQS for CO.
The Ozone Attainment Demonstration Plan November 14, 1994	Establishes the regulatory groundwork in order to bring the SJVAB into compliance with the NAAQS for ozone. This plan also satisfies the required triennial review for the CAAQS
Revised 1993 Rate of Progress Plan, November 4 1994	Demonstrates reasonable further progress in reducing VOC emissions between 1991 and 1996 mandated by FCAAA
Revised Post-1996 Rate of Progress Plan, September 20, 1995	Demonstrates reasonable further progress in reducing VOC emissions between 1997 and 1999 mandated by FCAAA
California Clean Air Act Triennial Progress report and Plan Revision 1995-1997, December 1998	Reports progress in implementing the 1991 Air Quality Attainment Plan for the period 1995 to 1997.
California Clean Air Act Triennial Progress Report and Plan Revision 1997-1999, March 15, 2001	Reports progress in implementing the 1991 Air Quality Attainment Plan for the period 1997 to 1999.
2000 Ozone Rate of Progress Report, April 27, 2000	Demonstrates that mandated emission reductions were achieved form 1997 to 1999 and from 1990 to 1999 mandated by the FCAA.
PM-10 Attainment Demonstration Plan, May 15, 1997	Established the regulatory groundwork in order to bring the SJVAB to compliance with the NAAQS for PM-10.
PM-10 Attainment Plan Progress Report, August 17, 2000	Describes progress achieved by the SJVAPCD in implementing the PM-10 Attainment Demonstration Plan.

Source: Guide for Assessing and Mitigating Air Quality Impacts, SJVAPCD, 1-10-02

4.3.1.d SJVAPCD Rules, Regulations, and Programs

The SJVAPCD's primary means of implementing air quality plans is by adopting rules and regulations. The CH&SC [§42300 et. seq.] authorizes districts to adopt rules and

regulations and to pursue civil and criminal penalties for violations. The law allows for fines and civil penalties of up to $50,000 per day and imprisonment in the county jail for up to one year. The SJVAPCD has adopted rules on sources ranging from architectural coatings (Rule 4601) to Orchard Heaters (Rule 4303) to Rubber Tire Manufacturing (Rule 4681). The SJVAPCD rulebook contains more than 130 rules and more are scheduled for rule development over the next few years.

4.3.1.e Nonattainment Classifications

Ozone Nonattainment Classifications

Federal: In July 1997, EPA adopted a new eight-hour standard for ozone that is replacing the one-hour standard. The Clean Air Act, however, includes provisions (Subpart 2 of part D of Title I) that address the requirements for nonattainment areas that do not meet the one-hour standard. EPA has concluded that these provisions should continue to apply until an area attains the one-hour standard, at which time the provisions will no longer apply.

The one-hour ozone classifications were based on the "design value" for ozone. Table 2-4 depicts the one-hour ozone classifications established by the EPA [Federal Register 11/6/91, pg. 56694]. Exceedance of the standard is based on the fourth highest ozone reading in three consecutive years registered at any monitoring station in the air basin. The SJVAPCD has been redesignated the SJVAB to severe nonattainment with a 2005 attainment date based on the failure to attain the ambient ozone standard by 1999. Several monitoring sites exceeded the standard numerous times during 1999 and 2000 (see Figure 4.3 - 2, 2000 Air Quality Data)

Table 4.3 - 4

Federal Ozone Classifications

Category	Design Value	Primary Standard Attainment Date
Marginal	0.121 up to 0.138 ppm	3 years after enactment *(November 15, 1993)*
Moderate	0.138 up to 0.160 ppm	6 years after enactment *(November 15, 1996)*
Serious	0.160 up to 0.180 ppm	9 years after enactment *(November 15, 1999)*
Severe 15	0.180 up to 0.191 ppm	15 years after enactment *(November 15, 2005)*
Severe 17	0.190 up to 0.280 ppm	17 years after enactment *(November 15, 2007)*
Extreme	0.280 ppm and above	20 years after enactment *(November 15, 2020)*

Source: Guide for Assessing and Mitigating Air Quality Impacts, SJVAPCD, 1-10-02

The nonattainment classification system for the eight-hour standard has not yet been designed. Nonattainment areas are yet to be designated. Exceedance of the standard, however will be based on the fifth highest eight-hour average per year, averaged over three consecutive years at any monitoring station in the air basin.

Table 3-6 (d)
2000 Air Quality Data for 1-Hour and 8-hour Ozone

MONITORING STATIONS	OZONE (O_3) 1-Hour Average			O_3 8-Hour Average	
	Concentrations *(ppm)*	# of days exceeded		Concentrations *(ppm)*	# of days over
	Maximum 1-hour	State 1-hr *(0.09 ppm)*	Federal 1-hr *(0.12 ppm)*	Maximum *8-hour*	Federal 8-hr *(0.08 ppm)*
Fresno County					
Clovis - Villa Ave.	0.153	49	8	0.131	44
Fresno - Sierra Sky Park	0.139	69	8	0.125	70
Fresno - First St.	0.143	48	5	0.109	41
Fresno - Drummond St.	0.131	37	2	0.104	24
Parlier	0.165	81	17	0.120	66
Shaver Lake - Perimeter Rd.	0.116	26	0	0.091	13
Kern County					
Arvin - Bear Mt.	0.145	82	9	0.117	73
Bakersfield - Golden State	0.117	28	0	0.101	30
Bakersfield - California Ave.	0.125	41	1	0.106	40
Edison	0.151	72	9	0.117	58
Maricopa - Stanislaus St.	0.112	8	0	0.099	15
Oildale - Manor St.	0.124	31	0	0.107	36
Shafter - Walker St.	0.123	18	0	0.106	25
Kings County					
Hanford - S. Irwin St.	0.124	48	0	0.11	51
Madera County					
Madera - Pump Yard	0.104	8	0	0.096	9
Merced County					
Merced - S. Coffee Ave.	0.120	32	0	0.112	37
San Joaquin County					
Stockton - Hazelton St.	0.107	4	0	0.080	0
Stockton - E. Mariposa St.	0.108	4	0	0.084	0
Tracy - Patterson Pass Rd.	0.122	7	0	0.094	3
Stanislaus County					
Modesto - 14th Street	0.131	7	1	0.101	4
Turlock - S. Minaret St.	0.131	15	1	0.107	10
Tulare County					
Sequoia - Lookout Pt.	0.116	45	0	0.106	52
Sequoia & Kings Canyon NP	0.120	41	0	0.108	40
Sequoia - Lower Kaweah	0.108	8	0	0.094	8
Visalia - Church St.	0.129	46	1	0.099	29

Source: California Air Resources Board. California Air Quality Data. (http://www.arb.ca.gov/aqd/aqd.htm)

Figure 4.3-2, 2000 Air Quality Data

The primary standard attainment date is measured from the date of the enactment of the Clean Air Amendments of 1990 *(November 15,1990).*

California: Ozone classifications are based on the maximum 1-hour concentration of ozone registered at any monitoring station in the air basin during the year, discounting highly irregular or exceptional events.

Table 4.3 - 5 depicts the ozone classifications established by ARB and listed in the CH&SC [§40921.5]. California has not adopted an eight-hour ozone standard.

Table 4.3 - 5

California Ozone Classifications

Category	Maximum 1-hour Concentration
Moderate	greater than 0.09 to not more than 0.12 ppm, inclusive
Serious	0.13 to 0.15 ppm' inclusive
Severe	0.16 to 0.20 ppm, inclusive
Extreme	greater than 0.20 ppm

Source: Guide for Assessing and Mitigating Air Quality Impacts, SJVAPCD, 1-10-02

PM-10 Nonattainment Classifications

Federal:

The SJVAB is designated as serious non-attainment for PM-10 and is required to reach attainment of the annual and 24-hr standards by December 31, 2001. The SJVAPCD failed to attain the 24-hr and annual standards by that date and are required to submit a new plan by December 31, 2002 to demonstrate attainment at the earliest practicable date. US EPA has not acted on the PM- 10 Attainment Plan submitted in 1997, but is expected to disapprove the plan. The 1997 plan requested a five-year extension from EPA, but it has also not been approved to date. Ah extension, if approved, would allow the SJVAB to achieve both the annual and the 24-hr standards by December 31, 2006.

California:

The ARB has no separate classification scheme other than nonattainment or attainment for PM-10.

PM-2.5 Nonattainment Classifications

Federal:

The EPA adopted a PM-2.5 standard in July 1997. Due to lack of PM-2.5 data, in accordance with the Clean Air Act requirement that EPA make designation determinations (i.e., attainment, nonattainment, or unclassifiable) within 2-3 year of

revising a standard, EPA will designate all air basins as unclassifiable in 1999. Between 2001 and 2005, as monitoring data becomes available, EPA will redesignate areas to attainment or nonattainment.

California: The ARB has not adopted a PM-2.5 standard.

Carbon Monoxide Nonattainment Classifications

Federal: Carbon monoxide classifications are based on the "design value" for CO. This is the fourth highest CO reading in three consecutive years registered at any monitoring station in the air basin. Table 4.3 - 6 depicts the CO classifications established by the EPA [Federal Register 11/6/91, pg. *56694):*

Table 4.3 - 6

Federal Carbon Monoxide Classifications

Category	Design Value	Attainment Date
Moderate	9.1 to less than 16.5 ppm	1995
Serious	greater than or equal to 16.5 ppm	2000

Source: Guide for Assessing and Mitigating Air Quality Impacts, SJVAPCD, 1-10-02

California:

Carbon monoxide classifications are based on the maximum 8-hour average of CO registered at any monitoring station in the air basin during the year, discounting highly irregular or exceptional events. Table 4.3 - 7depicts the CO classifications established by ARB and listed in the CH&SC [§40921.5]:

Table 4.3 - 7

California Carbon Monoxide Classifications

Category	Maximum 8-hour Average Concentration
Moderate	greater than 9.0 to 12.7 ppm, inclusive
Serious	greater than 12.7 ppm

Source: Guide for Assessing and Mitigating Air Quality Impacts, SJVAPCD, 1-10-02

4.3.1.e(1) Air Quality in the San Joaquin Valley

SJVAB Air Quality Designations and Classifications

As detailed in the previous section, both the ARB and the EPA have established air pollution standards in an effort to protect human health and welfare. Geographic areas are designated "attainment" if these standards are met and nonattainment if they are not met. In addition, each agency has several levels of classifications based on severity of the problem. The SJVAB is classified "severe nonattainment" for the state and the federal ozone standard (The SJVAB was reclassified to "severe" nonattainment

effective December 10, 2001) and "serious nonattainment" for the federal PM-1O standard. The urbanized areas of Fresno, Bakersfield, Stockton, and Modesto are classified "attainment" and all the non-urbanized area of the SJVAB are classified as "unclassified/attainment" for federal carbon monoxide standards. Fresno, Kern, Tulare, Stanislaus, and San Joaquin Counties are designated as "attainment" and Merced, Madera, and Kings Counties are designated "unclassified" by the state for carbon monoxide standards. Current state and federal designations in the SJVAB for each criteria air pollutant are shown in Table 4.3 - 8.

Table 4.3 - 8
SJVAPCD Designations and Classifications

Pollutant	Designation/Classification	
	Federal	State
O_3 One hour	Nonattainment/Severe[1]	Nonattainment/severe
O_3 Eight hour	*To Be Determined*	*No State Standard*
PM-10	Nonattainment/Serious	Nonattainment
PM-2.5	*To Be Determined*	*No State Standard*
CO - Fresno Urbanized Area Remainder of Fresno County	Attainment[2] Unclassified/Attainment	Attainment[3] Attainment
CO - Merced, Madera, and Kings Counties	Unclassified/Attainment	Unclassified
CO - Kern (SJVAB portion), Tulare, Stanislaus, and San Joaquin Counties	Unclassified/Attainment	Attainment
$N0_2$	Unclassified/Attainment	Attainment
SO_2 Kern County (SJVAB portion)	Attainment	Attainment
SO_2- All Other Counties	Unclassified	Attainment
Lead (Particulate)	*No Designation*	Attainment
Hydrogen Sulfide	*No Federal Standard*	Unclassified
Sulfates	*No Federal Standard*	Attainment
Visibility Reducing Particles	*No Federal Standard*	Unclassified

Source: *Maps & Tables of the Area Designations for the Slate and National Ambient Air Quality Standards and Expected Peak Day Concentrations and Designation Values,* Air Resources Board, January 1998; Classification letter, ARB Staff; March 16, 1993; ARB Action, November 9, 1994; ARB Action, November 21, 1996; ARB Action, September 24, 1998.

Notes:

1. The S,IVAB was reclassified to "severe" nonaftainment for ozone effective December 10, 2001. The EPA final rule was published in the Federal Register on November 8, 2001. The rule requires a new state implementation plan by May 31, 2002 and changes the boundary of the nonattainment area to separate out eastern Kern County as its own nonattainment area. EPA declined to extend the attainment deadline from November 15, 2005 to a November 15, 2007 date.
2. 40 CFR Parts 52 and 81-- Fresno Urbanized Area, Bakersfield Metropolitan Area, Stockton Urbanized Area and Modesto Urbanized Area redesignated on March 31, 1998, effective June 1, 1998.
3. Fresno Urbanized Area was designated attainment at the ARB Board Meeting of September 24, 1998.

Because of the recent adoption of the PM-2.5 Standard, and the lack of PM-2.5 data, EPA has made no attainment classification for any air basin.

4.3.1.f Air Pollutant Properties, Effects and Sources

The following section describes the pollutants of greatest importance in the San Joaquin Valley. It provides a description of the physical properties, the health and other effects of the pollutant, and the sources of the pollutant.

Pollutant: Ozone

Description and Physical Properties - Ozone is what is known as a photochemical pollutant. It is not emitted directly into the atmosphere, but is formed by a complex series of chemical reactions between reactive organic gases (ROG), NOx, and sunlight. ROG and NOx are emitted from automobiles, solvents, and fuel combustion, the sources of which are widespread throughout the SJV. In order to reduce ozone concentrations, it is necessary to control the emissions of these ozone precursors. Significant ozone formation generally requires an adequate amount of precursors in the atmosphere and several hours in a stable atmosphere with strong sunlight. Ozone is a regional air pollutant. It is generated over a large area and is transported and spread by wind. The worst ozone concentrations tend to be found downwind from emission sources in SJV metropolitan areas, though the results of the San Joaquin Valley Air Quality Study indicates that "high ozone concentrations in the Valley were due to varying combinations of local and transported pollutants" (San Joaquin Valley Air Quality Study Results, Bulletin #1).

Effects - While ozone in the upper atmosphere protects the earth from harmful ultraviolet radiation, high concentrations of ground level ozone can adversely affect the human respiratory system. Many respiratory ailments, as well as cardiovascular disease, are aggravated by exposure to high ozone levels. Ozone also damages natural ecosystems such as forests and foothill communities, and damages agricultural crops and some man-made materials, such as rubber, paint, and plastics.

Pollutant: Reactive Organic Gases (ROG)

Description and Physical Properties - Reactive organic gases, in this document also known as volatile organic compounds, are photochemically reactive hydrocarbons that are important for ozone formation. This definition excludes methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonates, methylene chloride, methyl chloroform and various chlorofluorocarbons (CFCs).

Effects - There are no health standards for ROG separately. The main concern with ROG is its role in photochemical ozone formation. In addition, some compounds that make up ROG are also toxic. Ah example is benzene, which is a carcinogen.

Sources - The primary sources of ROG are mobile sources, solvents, farming operations and other area sources, and oil & gas production. Table 4.3 - 9 shows the 1999 ROG inventory for the entire SJV.

Table 4.3 - 9

1999 ROG Emissions *(SJV)*

Category	tons/day	% of total
Fuel Combustion	103.2	2.0%
Waste Disposal	4 03	79%
Cleaning & Surface Coating	31.41	6.1%
Oil & Gas Production & Marketing	52.04	10.2%
Industrial Processes	12.08	2.4%
Solvent Evaporation	73.69	14.3%
Farming Operations	70.07	13.7%
Waste Burning &Disposal	31.45	6.1%
Other Area Sources	6.93	1.4%
On-road Motor Vehicles	165.69	32.3%
Other Mobile Sources	52.76	10.3%
Natural Sources	2.16	0.4%
Total	512.64	100%

Source: Guide for Assessing and Mitigating Air Quality Impacts, SJVAPCD, 1-10-02

Pollutant: Oxides of Nitrogen (NOx)

Description and Physical Properties - NOx is a family of gaseous nitrogen compounds and are precursors to ozone formation. The major component of NOx, nitrogen dioxide (NO_2), is a reddish-brown gas that is toxic at high concentrations. NOx results primarily from the combustion of fossil fuels under high temperature and pressure.

Effects - Health effects associated with NOx are an increase in the incidence of chronic bronchitis and lung irritation. Chronic exposure to NO_2 may lead to eye and mucus membrane aggravation, along with pulmonary dysfunction. NOx can cause fading of textile dyes and additives, deterioration of cotton and nylon, and corrosion of metals due to production of particulate nitrates. Airborne NOx can also impair visibility. NOx is a major component of acid disposition in California.

Sources - On-road and off-road motor vehicles and fuel combustion are the major sources of this air pollutant, and they emit approximately 43.6% (on-road), 23.6% (off-road) and 26.5% (fuel combustion) of the total NOx released in the SJV. Table 4.3 - 10 shows the 1999 NOx inventory for the SJVAB.

Table 4.3 - 10

1999 NOx Emissions *(SJV)*

Category	tons/day	% of total
Fuel Combustion	160.47	26.8%
Other Industrial Processes	23.63	4.0%
Area Wide Sources	11.40	1.9%
Light-duty Auto and Trucks	114.50	19.1%
Med. & Heavy Gas & Diesel Trucks	133.94	22.4%
Buses (Transit and School)	4.05	17.6%
Mobile Homes	2.35	.68%
Farm Equipment	67.41	11.3%
Off-Road Equipment	50.86	8.5%
Trains	19.65	3.29%
Other Mobile	8.02	1.34%
Natural Sources (wildfire)	1.8	0.3%
Total	598.06	100%

Source: Guide for Assessing and Mitigating Air Quality Impacts, SJVAPCD, 1-10-02

Pollutant: Carbon Monoxide (CO)

Description and Physical Properties - CO is an odorless, colorless gas that is highly toxic. It is formed by the incomplete combustion of fuels and is emitted directly into the air (unlike ozone). Under most conditions, CO does not persist in the atmosphere and is rapidly dispersed. CO exceedances are most likely to occur in the winter, when relatively low inversion levels trap pollutants near the ground and concentrate the CO. Since CO is somewhat soluble in water, normal winter conditions of rainfall and fog can suppress CO concentrations.

Effects - Carbon monoxide binds strongly to hemoglobin, the oxygen-carrying protein in blood, and thus reduces the blood's capacity for carrying oxygen to the heart, brain, and other parts of the body. At high concentrations, CO can cause heart difficulties in people with chronic diseases, can impair mental abilities, and can even cause death.

Sources - The main source of CO in the SJV is on-road motor vehicles. On-road motor vehicles contribute approximately 68.3% of total CO emissions. Other CO sources in the SJV include other mobile sources and waste burning. Because most of these CO sources are the indirect result of urban development, most emissions and unhealthy CO levels occur in major urban areas. Table 4.3 - 11 shows the 1999 CO inventories for the entire SJVAB.

Table 4.3 - 11

1999 CO Emissions *(SJV)*

Category	tons/day	% of total
Fuel Combustion	56.65	2.0%
Industrial Processes	2.72	0.1%
Waste Burning & Disposal	373.57	13.3%
Residential Fuel Combustion	80.56	2.9%
Other Area/Station Sources	1.42	0.05%
Light-duty Passenger	660.87	23.5%
Light-duty & Medium Trucks	720.53	25.6%
Heavy-duty Trucks	462.92	16.4%
Other On-road Vehicles	37.86	1.3%
Other Mobile Sources	374.62	13.3%
Natural Sources	43.54	1.55%
Total	2,815.27	100%

Source: Guide for Assessing and Mitigating Air Quality Impacts, SJVAPCD, 1-10-02

Pollutant: Particulate Matter (PM-10 and PM-2.5)

Description and Physical Properties - Suspended particulate matter (airborne dust) consists of particles small enough to remain suspended in the air for long periods. Respirable particulate matter (PM-10 and PM-2.5) includes particulates of 10 microns or less in diameter-those which are small enough to be inhaled, pass through the respiratory system, and lodge in the lungs, with resultant health effects.

PM-10 and PM-2.5 are comprised of dust, sand, salt spray, metallic, and mineral particles, pollen, smoke, mist, and acid fumes. Also of importance are sulfate ($S0_4$) and nitrates NO_3) which are secondary particles formed as precipitates from photochemical reactions of gaseous sulfur dioxide ($S0_2$) and NOx in the atmosphere.

The actual composition of PM-10 and PM-2.5 varies greatly with time and location. It depends on the sources of the material and meteorological conditions.

Effects - Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases, heart and lung disease, and coughing, bronchitis, and respiratory illnesses in children. Recent mortality studies have shown a statistically significant direct association between mortality and daily concentrations of particulate matter in the air. Non-health-related effects include reduced visibility and soiling of buildings.

Sources - Generally speaking, PM-2.5 sources tend to be combustion sources like vehicles, power generation, industrial processes, and wood burning, while PM- 10 sources include these same sources plus roads (36.6%) and farming activities

(23.2%).60 Fugitive windblown dust and other area sources also represent sources of airborne dust in the SJVAB. Table 4.3 - 12 shows the 1999 PM-10 inventories for the entire SJVAB. A *PM-2.5* inventory will be developed, as data becomes available.

Table 4.3 - 12

1999 PM-10 Emissions *(SJV)*

Category	tons/day	% of total
Fuel Combustion	8.99	1.9%
Industrial Processes/Other Station	20.15	4.2%
Farming operations	111.28	23.1%
Construction & Demolition	24.46	5.1%
Road Dust	175.47	36.4%
Fugitive Windblown	51.13	10.6%
Waste Disposal & Burning	51.09	10.6
Other Area-wide Sources	14.13	2.9%
Mobile Sources	16.4	3.4%
Natural Sources	8.35	1.7%
Total	481.45	100%

Source: Guide for Assessing and Mitigating Air Quality Impacts, SJVAPCD, 1-10-02

Other Pollutants

Sulfur Dioxide: Sulfur dioxide (SO_2) is a colorless, irritating gas with a "rotten egg" smell formed primarily by the combustion of sulfur-containing fossil fuels. Historically, in the late 1970's in Kern County, SO_2 was a pollutant of concern but with the successful application of regulations, the levels have reduced significantly. In fact, the latest data from the ARB demonstrates that the highest 1-hour concentration for SO_2 was 0.011 ppm. With the CAAQS being 0.25 ppm, it demonstrates that SO_2 concentrations in the SJVAB are only about 4 percent of the standard.

Sulfates: Sulfates are particulate products of combustion of sulfur-containing fossil fuels. When SO or SO_2 come in contact with oxygen it precipitates out into sulfates (SO_3 or SO_4). Data collected in the SJVAB demonstrate levels of sulfates significantly less than the health standards.

Lead: Lead is a metal that is a natural constituent of air, water, and the biosphere. Lead is neither created nor destroyed in the environment, so it essentially persists forever. Lead was used until recently to increase the octane rating in auto fuel61. Since gasoline-powered automobile engines were a major source of airborne lead through the use of leaded fuels and the use of leaded fuel has been mostly phased out, the ambient concentrations of lead have dropped dramatically. In fact, the SJVAPCD no longer even monitors lead in the ambient air of the SJVAB.

Hydrogen Sulfide: Hydrogen sulfide (H_2S) is associated with geothermal activity, oil and gas production, refining, sewage treatment plants, and confined animal feeding operations. The California ambient air quality standard for H_2S is .030 ppm for 1 hour. Hydrogen sulfide is extremely hazardous in high concentrations (800 ppm can cause death) especially in enclosed spaces. OSHA regulates workplace exposure to H_2S. The entire SJVAB is unclassified for H_2S attainment.

Visibility Reducing Particles: This standard is a measure of visibility. The ARB does not yet have a measuring method with enough accuracy or precision to designate areas in the state attainment or nonattainment. The entire state is labeled unclassified.

4.3.2. Impact Analysis

The SJVAB has one of the most severe air pollution problems in the State of California and the nation. Air pollution is hazardous to health, diminishes the production and quality of many agricultural crops, reduces visibility, degrades or soils materials, and damages native vegetation. State and national ambient air quality standards were created to protect the public health and welfare, and to minimize the other effects mentioned above. The standards address pollutants in the ambient air, the air that people breathe outside of buildings, as they go about their daily activities. The SJVAB does not meet the standards for ozone and respirable particulate matter (PM - 10). In recent years the standard for carbon monoxide (CO) has not been exceeded in the SJVAB, however, background concentrations are still high enough for CO hot spots to be potential problems in urban areas with high levels of traffic congestion. Further information regarding these pollutants and the status of air quality in the SJVAB is provided throughout this document and the separate Technical Document.

Nearly all development projects in the San Joaquin Valley (SJV), from general plans to individual site plans, have the potential to generate pollutants that will worsen air quality or make it more difficult for state and national air quality attainment standards to be attained. Therefore, for most projects, it is necessary to evaluate air quality impacts to comply with CEQA. The Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI) published by the SJVAB is intended to help public agencies review and evaluate these imp acts. A properly prepared CEQA document will inform decision-makers and the public about the air quality impacts of a project and facilitate a public dialogue regarding their implications. It will serve not only to protect the environment, but will also demonstrate to the public that it is being protected.

KCAG Air Quality Modeling Requirements – 2025 Model Impacts

The San Joaquin Valley is an eight-county area containing six Metropolitan Planning Organizations (MPOs) and two Rural Transportation Planning Agencies (RTPAs). The San Joaquin Valley is a single air pollution planning area (air basin) served by the San Joaquin Valley Air Pollution Control District (SJVAPCD).

Section 93.124 (d) of the 1997 final Transportation Conformity Rule (40 CFR Part 93) allows for conformity determination for subregional emission budgets by MPOs if the

applicable implementation plans (or implementation plan submission) explicitly indicates an intent to create such subregional budgets for the purpose of conformity. Additionally, Section 93.132(e) of the 1993 EPA final rule, and section 93.124 (e) of the 1997 final rule states: "...if a nonattainment area includes more than one MPO, the implementation plan SIP may establish motor vehicle emission budgets for each MPO, or else the MPOs must collectively make a conformity determination for the entire nonattainment area." Each applicable implementation plan and estimate of baseline emissions in the San Joaquin Valley lists motor vehicle emission budgets by county, to facilitate county-level conformity findings.

The San Joaquin Valley conformity implementation rule (also referred to as Conformity SIP) was adopted by the Air District on January 19, 1995 and submitted to EPA. This rule specified that conformity determinations in the Valley be performed by the MPOs on a county level. Conformity determinations have always been performed on a county level in the San Joaquin Valley. In order to ensure that the emission budget for the entire Valley is not exceeded, each county must ensure that their motor vehicle emissions do not exceed the emission budget specified for their county, or face a finding of nonconformity and resulting loss of federal funding and approvals. The County TPAs maintain regular coordination with the Air District to ensure that Valleywide emission budgets are never exceeded. Some procedures in the conformity SIP will later be changed to be consistent with new federal guidance and conformity rule numbering and other changes. This conformity finding complies with the 1995 conformity SIP as well as subsequent guidance issued by EPA and/or FHWA.

4.3.2.a Methodology

The GAMAQI recommends that General Plan level analysis utilize models that analyze countywide impacts such as the Regional Transportation Plan. The Kings County Association of Governments has just completed its Air Quality Conformity Determination for the 2001 Regional Transportation Plan and 2000 Federal Transportation Improvement Program (December 2001). This report, the methodology, and conclusions are used in the General Plan level analysis for the Hanford General Plan update.

KCAG Air Quality Analysis Methodology and Modeling

Section 93.111 of the 1997 Transportation Conformity Rules requires the use of the latest emission estimation model in development of conformity determinations. In California, there are two Motor Vehicle Emission Inventory (MVEI) models currently in use: MVEI7F and MVEI7G. The MVEI models include EMFAC (*EM*ission *FAC*tor) and BURDEN (so named because it estimates the *burden* placed on the atmosphere) as part of the series of computer models used to estimate on-road motor vehicle emissions. EMFAC7F and EMFAC7G are the emission factor portions of the modeling series, while BURDEN7F and BURDEN7G are the emission estimation segments of the modeling series. In 1997, the California Air Resources Board requested that EPA approve the use of EMFAC7G for use in conformity assessments. The request and subsequent EPA approval specifically states that EMFAC7G should be used to assess conformity for transportation plans and programs when EMFAC7G has been used in the

applicable air quality plan. Furthermore, if emission budgets from the applicable air quality plan were developed using EMFAC7F, the agency must continue to use EMFAC7F to assess conformance with those emission budgets.

This conformity analysis uses the officially approved latest model, EMFAC7F, for comparison to motor vehicle emission budgets developed with EMFAC7F. These emission budgets include the VOC and NOx budgets in the *1994 Ozone Attainment Demonstration Plan* and the CO budget in the *1996 Carbon Monoxide Maintenance Plan* (which is not applicable to Kings County but is mentioned here for completeness). The EMFAC7G model was used to develop the *1997 PM_{10} Attainment Demonstration Plan*, and associated baseline emission inventory for PM_{10}, VOC, and NOx . In order to maintain consistency with the emission model used in development of the *1997 PM_{10} Attainment Demonstration Plan* and per EPA guidance regarding the use of EMFAC7G, the EMFAC7G model was used to assess conformity with the motor vehicle emission test (less than 1993 baseline) for PM_{10}.

The 1993 baseline is used for two reasons. First, the 1997 PM-10 Attainment Demonstration Plan has calendar year 1993 as its baseline emission inventory year. This baseline was developed as a cooperative effort between the Air District and the eight San Joaquin Valley Transportation Planning Agencies (TPAs). Second, no 1990 baseline exists. Therefore, EPA Region IX and FHWA indicated verbally on April 26, 1999 (and confirmed in writing by FHWA California Division in a letter dated May 3, 1999) that the 1993 motor vehicle emissions inventory is the appropriate baseline year to use for this conformity analysis.

The models were applied as follows:

- The Kings TP+ transportation model (described earlier) was used to estimate total daily vehicle miles traveled (VMT) and trips for each analysis year;
- The distribution of VMT and trips by vehicle class was developed by ARB and is included in the input files to the BURDEN program known as "ACTVERT.DAT". Since neither Kings County nor the San Joaquin Valley Air Pollution Control District has ever performed a survey of vehicle class distributions, use of the ARB distributions included in the ACTVERT file was the only reasonable option.
- The VMT and trips for each analysis year was distributed in the same manner as the nearest calendar year included in the BURDEN ACTVERT files. The ACTVERT files were modified to include the new modeled VMT and trips.
- The distribution of travel by the six BURDEN time periods and the speed distributions by time of day (ACT_SPLT.DAT and PSPD.DAT) are also included as inputs to the BURDEN model that were developed by ARB, with input from Kings County.
- The inputs for EMFAC contain assumptions regarding vehicle fleet and age distributions as well as mileage accumulation. No alternate data exists for the San Joaquin Valley so these inputs were not modified.

The EMFAC /BURDEN7F model was run for a summer day for each analysis year to estimate VOC and NOx for the ozone plan. Default assumptions for I/M, fuels, the NOx standard, the LEV implementation schedule, the off-cycle correction factor, and the high emitter correction factor were used. The resulting emission totals for each of the vehicle classes were provided to the spreadsheet for adjusting the emissions for control measures not included in the EMFAC7F model (see note below). The spreadsheet contains revised control factors provided by the ARB in April 17, 2000. Control factors are included for measures not included in the EMFAC7F model, such as heavy duty diesel adjustments and measures identified by ARB as "State Measures" and "Federal Measures". The spreadsheets, entitled "factor7f-YR.xls", are included in Appendix B of the full report found in Appendix 4-3-A of Volume II of this EIR.

The EMFAC7G/BURDEN7G model was run for both winter and summer days for each analysis year to estimate PM_{10}, NOx and VOC. PM_{10} emissions estimated by the model include exhaust, brake, and tire wear.

A PM_{10} worksheet for use in evaluating entrained road dust was developed in coordination with the San Joaquin Valley Air Pollution Control District (SJVAPCD) and the Valley TPAs. The PM_{10} worksheet incorporates motor vehicle related PM_{10} emissions for entrained road dust with the EMFAC7G and BURDEN 7G outputs in order to complete the PM_{10} motor vehicle emission inventory for each county. The PM_{10} worksheet incorporates and documents the emission estimation methodology used by the SJVAPCD and ARB to develop the baseline year PM_{10} and precursor emission inventory. The worksheet used in this analysis, entitled "PM-10 Kings analysis.xls", is included in Appendix B of the full report found in Appendix 4-3-A of Volume II of this EIR.

As a final note, this conformity documentation uses the latest information on the effectiveness of control measures such as Inspection and Maintenance Program. A number of control measures were implemented after the development of EMFAC7F and EMFAC7G. The California Air Resources Board on April 17, 2000 updated the 2002-2010 emission control factors used with the EMFAC7F emissions model due to changes in implementation of California's Enhanced Vehicle Inspection and Maintenance Program and revised estimates of the benefits of other state programs. These updated factors were applied to the emission factors or to the emission totals as appropriate and are documented in Appendix A of the full report found in Appendix 4-3-A of Volume II of this EIR. Kings County has a basic I/M program in place.

PM_{10} Emissions from Construction Dust:

Section 93.122(d)(2) of the federal conformity rule requires that PM_{10} from construction-related fugitive dust be included in the regional PM_{10} emissions analysis, if it is identified as a contributor to the nonattainment problem in the PM_{10} implementation plan. There is no currently applicable PM_{10} implementation plan but the SJVAPCD has indicated that they believe construction dust is a significant contributor to PM_{10} concentrations. PM_{10} transportation construction emissions are also not included in the baseline on road motor vehicle emissions inventory. However, construction emissions are included in this

analysis even though the baseline against which KCAG is comparing does not include them.

4.3.2.b Standards of Significance

For the purpose of this EIR, a significant adverse impact would occur if the proposed project would result in the:

This section provides SJVAPCD recommended thresholds for determining whether projects have significant adverse air quality impacts as defined by CEQA. Projects demonstrated to have significant adverse impacts are required to mitigate impacts to levels considered less than significant or to prepare an EIR.

SJVAPCD Basis for Thresholds of Significance

The SJVAPCD used the OPR definitions of significant environmental effect as a basis to establish air quality Thresholds of Significance for the San Joaquin Valley. Section 15382 of the CEQA Guidelines defines "significant effect on the environment" as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including... air."

The Air Quality Section of Appendix G of the CEQA Guidelines (Environmental Checklist Form) contains a list of effects that may be deemed potentially significant. These are:

a) Conflict with or obstruct implementation of the applicable air quality plan;

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation;

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project is non-attainment under applicable federal or state ambient air quality standards (including releasing emissions that exceed quantitative thresholds for ozone precursors);

d) Expose sensitive receptors to substantial pollutant concentrations; or

e) Create objectionable odors affecting a substantial number of people.

For some types of impacts, the criteria listed above are straight forward, but in other cases, they require interpretation. A violation of air quality standards can be predicted for pollutants that can be modeled for atmospheric concentration. This is the case for carbon monoxide for which violations can be predicted using a dispersion model. Ozone, however, is the product of a photochemical reaction that may occur many miles away from the source of emissions. Although atmospheric ozone models exist, they are only sensitive enough to register changes caused by the largest projects. What is more important for determining ozone impacts is a project's contribution to existing violations of the ozone standard in the SW. By comparing a project's ozone precursor emissions

with emission levels considered important under state law, this impact can be evaluated. One such level is the stationary source emissions offset threshold required by the CCAA. Additionally, the most common measure of significance for toxic air contaminants is an increase in cancer risk based on exposure levels for the nearest sensitive receptor, while odor impacts can be judged significant based on the number of complaints expected for each type of odor producing process. These criteria are described in greater detail below.

While CEQA Guidelines state that an ironclad definition of a significant effect is not possible because the significance of an effect may vary with the setting, the SJVAPCD has determined that the setting, as referred to in CEQA, can be defined for air quality. Under California state law, the SJVAB is defined as a distinct geographic area with a critical air pollution problem for which ambient air quality standards have been promulgated to protect public health. As such, the SJVAPCD resolves that significance thresholds established herein are based on scientific and factual data. Therefore, the SJVAPCD recommends that Lead Agencies use these thresholds in making a determination of significance. However, it is still recognized that the final determination of whether or not a project has a significant effect is ultimately within the purview of the Lead Agency pursuant to CEQA Guidelines.

Basis for Ozone Precursor Thresholds. The entire SJVAB often violates state and federal ozone ambient air quality standards. Therefore, emissions related to an individual project, if substantial, will contribute to the existing violations of the ozone standards. The SJVAPCD defines "substantial contribution" for ozone precursor emissions in terms of CCAA requirements. The SJVAPCD's New and Modified Stationary Source Review Rule - Offset Requirements for nitrogen oxides (NOx) and volatile organic compounds (VOCs) (in this document, equivalent to reactive organic gases [ROG]) reflects the CCAA requirements. Rule 2201 sets emissions thresholds above which stationary pollution sources must offset all emissions down to the thresholds. The offset thresholds vary depending on the severity of the pollution problem in each air basin and the type of pollutant. Areas categorized as severe ozone nonattainment areas such as the SJVAB have lower thresholds than areas categorized as having only a moderate ozone problem. The SJVAPCD staff also researched and evaluated many significance thresholds established by other air quality management agencies in California and found that most agencies use the same approach. Although it may be argued that any increase in pollutant emissions in an area with a severe pollution problem may be significant, a reasonable threshold is still needed to avoid unnecessarily burdening every project with a requirement to prepare an EIR, which is clearly not intended by CEQA nor desired by the SJVAPCD.

CEQA requires that in evaluating the significance of a project's potential air quality impacts, the Lead Agency shall consider both primary (direct) and secondary (indirect) consequences. Primary impacts include emissions from project construction and emissions from motor vehicles traveling to and from the facility once it is operational. Ah example of a secondary impact would be the emissions associated with growth that may be facilitated by the expansion of a wastewater treatment plant.

Basis for PM-10 Thresholds.

The entire SJVAB is a serious nonattainment area for PM-10 and any addition to the current PM- 10 problem could be considered significant. However, the SJVAPCD has established regulations governing various activities that contribute to the overall PM-10 problem. The SJVAPCD has adopted a set of PM-10 Fugitive Dust Rules collectively called Regulation VIII. Several components of Regulation VIII specifically address fugitive dust generated by construction related activities. Therefore, the SJVAPCD has determined that any determination of significance with respect to construction emissions should be based on a consideration of the control measures to be implemented. From the perspective of the SJVAPCD, compliance with Regulation VIII for all sites and implementation of all other control measures will constitute sufficient mitigation to reduce PM-10 impacts to a level considered less-than-significant.

PM_{10} Emissions from Construction Dust – KCAG Analysis

The RTP indicates that approximately 9 lane miles will be constructed from 1998 to 2025, which equates to approximately .33 lane miles per year. Assuming that each lane is 12 feet wide, road construction occurs 5 days per week, and the ARB default project duration of 18 months, the number of lane miles of roadway to be constructed may be converted to acre-months. When combined with the PM_{10} emission rate of 0.11 tons per acre (MRI, 1996), the result is 0.00 tons per day. This approach is consistent with the ARB methodology for estimating road construction dust.

4.3.2.c Air Quality Impacts

The adoption of the General Plan Revisions would not have a direct air quality effect. Indirectly, the General Plan would accommodate new growth in population and employment, affecting local and regional air quality. The development of new land uses could also create air quality-related land use conflicts.

Regional Air Quality

KCAG Emissions Reduction Tests and the Budget Test Results – Year 2025

The 1997 final conformity rule requires the use of emissions budget tests (section 93.118) or, if emissions budgets are not available, the use of emissions reduction tests (section 93.119). The emissions budget test is met when emissions resulting from when the transportation plan or program is implemented are consistent with the motor vehicle emissions budget specified in the applicable SIP. Consistency is satisfied if it is demonstrated that emissions are less than or equal to the motor vehicle emissions budget.

Currently Kings County has an emission budget in place for ozone. KCAG must perform a "less-than-baseline" test for PM_{10} as the EPA found the budget inadequate on May 5, 1999. KCAG is not a CO nonattainment or maintenance area. As identified in Table 4.3 - 13 the San Joaquin Valley has EPA approved ozone and PM_{10} plans containing emissions budgets. In addition, the PM_{10} Attainment Demonstration Plan, submitted to

EPA on July 17, 1997, is considered complete by operation of law. The 1993 baseline emissions of PM_{10} and precursors (VOC and NOx) in that plan have been agreed to be adequate for purposes of demonstrating conformity to the emission reduction test. The 1993 baseline emissions were developed in consultation with the eight Valley TPAs, the Air District, EPA, FHWA, FTA, Caltrans and ARB. This conformity assessment documents consistency with all applicable emissions budgets as well as baseline emissions for PM_{10} and relevant precursors. In Table 4.3 - 15, emissions from VOC, NO_x, and PM_{10} are compared to 1993 baseline emissions.

Table 4.3 - 13

1993 Baseline Emissions Budgets

Pollutant	Applicable Test	EPA Adequacy
Ozone (VOC, NO_x)	Budget	Yes
PM_{10} (VOC, NO_x)	Less-than-baseline	Not applicable to baseline test

Source: Air Quality Conformity Determination for Kings County's 2001 Regional Transportation Plan & 2000 Federal Transportation Improvement Program, KCAG, December 2001.

Ozone:

The emissions budgets from the San Joaquin Valley Ozone Attainment Plan are specified for the year 1999 for VOC and NO_x in tons per average summer ozone season day. EPA approved the San Joaquin Valley Ozone Attainment Plan on February 7, 1997. These budgets must be maintained for all years following 1999. The budgets were developed by CARB using the EMFAC7F model with ozone season temperatures, and all currently applicable control measures in the San Joaquin Valley. The same procedures were followed in developing the emissions results detailed in Table 4.3 - 14.

Table 4.3 - 14

VOC and NO_x Conformity to Ozone Budgets in KCAG County*

Scenario	VOC	NO_x
1999 Budget	3.15	6.94
2005	2.43	5.51
2015	1.54	5.33
2025	1.51	6.00

** Tons per day (summer)*
Source: Air Quality Conformity Determination for Kings County's 2001 Regional Transportation Plan & 2000 Federal Transportation Improvement Program, KCAG, December 2001.

PM_{10}:

Baseline Emissions for 1993 PM_{10} and precursors VOC and NO_x are identified Table 4.3 - 15. Documentation of conformity for PM_{10} and its precursors are also contained in Table 4.3 - 15. Emissions of VOC, NO_x, and PM_{10} exhaust were calculated with EMFAC7G. Summer and winter conditions are averaged: summer emissions factors are multiplied by 8/12 and winter factors by 4/12. PM_{10} emissions from re-entrained road dust are calculated consistent with CARB methodology. These involve growing emissions in proportion to the growth in centerline miles of freeways and major arterials and in proportion to VMT for all other facility classes. These calculations use facility-specific emissions factors for re-entrained road dust developed by CARB. Local control factors (such as dust control programs) are also applied, using control factors developed by CARB for these measures in the San Joaquin Valley.

Table 4.3 - 15

PM_{10} and Related Emissions in KCAG County*

Scenario	PM_{10}[1]	NO_x	VOC
1993 Baseline	3.04	10.43	6.47
2005	1.64	4.92	2.34
2015	1.85	3.88	1.11
2025	2.00	4.17	0.96

** Tons per day (summer and winter)*
Source: Air Quality Conformity Determination for Kings County's 2001 Regional Transportation Plan & 2000 Federal Transportation Improvement Program, KCAG, December 2001.

The analysis documented in Table 4.3 - 15 was performed in accordance with 93.122 (a) and 93.122 (c) by KCAG in their report.

PM_{10} from Construction-Related Fugitive Dust

For areas in which the implementation plan does not identify construction-related fugitive PM_{10} as a contributor to the nonattainment problem, the fugitive PM_{10} emissions associated with highway and transit project construction are not required to be considered in the regional emissions analysis. The 1997 PM_{10} Attainment Demonstration Plan does identify construction-related dust as a contributor to the nonattainment problem; however, these emissions are not included in the inventory or emissions budget but were calculated as described earlier, and are included in the totals listed in Table 4.3 - 15.

1 Tabulated PM-10 emissions include entrained road dust, exhaust, brake and tire wear, and construction emissions.

Projects in the Transportation Plan and Program Conformity Findings

The following conformity findings were made KCAG considering projects contained in Kings County's 2001 RTP and 2000 FTIP:

- The 2001 RTP and 2000 FTIP for Kings County is consistent with the latest available mobile source emissions estimates. Socioeconomic data projections have been developed by KCAG considering DOF and Census estimates as well as input from local agency's general plans. KCAG's regional transportation model has applied these projections using generally accepted modeling procedures to forecast future year VMT and trips. As a result, these travel characteristics have been processed using BURDEN and EMFAC to forecast emissions for VOC, NO_x and PM_{10}.

- The 2001 RTP and 2000 FTIP for Kings County provides for expeditious implementation of TCMs. All TCMs have been implemented and are now ongoing programs. KCAG's commitment to implementing past TCMs is outlined in the TCM section of this chapter.

- The 2001 RTP and 2000 FTIP for Kings County results in emissions that are less than the emission budget or baseline emissions for VOC, NO_x and PM_{10}. This finding is based on analysis of each emissions budget scenario identified in Table 4.3 - 14 and Table 4.3 - 15. Positive conformity findings have been made for each pollutant by analysis year in Kings County.

Local Air Quality Impacts

Development in accordance with the General Plan would alter traffic volumes and change concentrations of localized pollutants such as carbon monoxide near streets and intersections. Concentrations of this pollutant are related to the levels of traffic and congestion along streets and at intersections.

Urbanization may create potential conflicts between new residences and existing industrial facilities, agricultural operations and odor-producing facilities such as wastewater treatment plants. This impact is considered potentially significant.

Build-out of the General Plan would result in new industry within the City of Hanford. The type or amount of such emissions is not predictable, since industrial emissions can vary greatly depending on the processes and materials involved. Any future industrial sources would be subject to the rules and regulations of SJVAPCD, which currently requires major new stationary sources to utilize BACT (Best Available Control Technology) and provide off-sets. Additional air quality analysis will be required for each new industry consistent with SJVAPCD GAMAQI guidelines.

A more important significance threshold would be exceeded if the General Plan were based on population projections that substantially exceeded that assumed in the 1991 *Air Quality Attainment Plan.* This is because the regional air plan has assumed and accounts for an incremental amount of growth within Kings County, and if actual

population exceeds this assumed increment additional control measures will be required to attain the ambient air quality standards.

The *1991 Air Quality Plan* is not based on an explicit forecast for population in the City of Hanford, but is based on forecasts of population for Kings County. The air plan assumes a 2 percent growth rate in Kings County during the period 1990-2000 (1990 population of 102,500 and 2000 population of 124,300). The actual growth in Kings County exceed the Air Quality Plan projections and the actual 2000 population was 129,461. The growth rate experienced by Kings County between 1990 and 2000 was 2.4 percent. The projections utilized within the General Plan assume an annual growth rate within Hanford of about 2.8 percent. It appears that the General Plan population projections are in excess of those found in the *1991 Air Quality Plan.*

4.3.2.d Mitigation Measures

Within the air quality portions of the Hazards Element of the General Plan there are numerous objectives, policies and programs that would mitigate potential conflicts between new residences and existing industrial facilities, agricultural operations, and odor producing facilities such as wastewater treatment plants. This impact is potentially significant.

The General Plan contains within the air quality portion of the Land Use, Circulation, Hazards, Open Space/Conservation/Recreation elements numerous objectives, policies and programs that would mitigate the regional impacts of future population growth within the City of Hanford. These policies and programs contain both short-term and long-term strategies for improvements to air quality. The policies and programs note that the City of Hanford will implement SJVAPCD rules and regulations designed to improve air quality. Nevertheless, the impact to air quality is considered significant. The following Objectives, Policies, and Programs address air quality issues in the General Plan; Objective LU 1(AQ), Policy LU 1.1(AQ), Program LU 1.1-A (AQ), Program, LU 1.1-B, Program LU 1.1-C, Program LU 1.1-D, Policy LU 1.2 (AQ), Policy, LU 2.2 (AQ), Program LU 3.2-A (AQ), POLICY LU 3.3 (AQ), Program LU 3.3-A, AQ), Policy LU 4.2 (AQ), Policy LU 5.1 (AQ), Policy LU 5.2 (AQ), Objective, LU 6 (AQ), Policy LU 6.2 (AQ), Program LU 6.2-A (AQ), Objective LU 7 (AQ), Policy LU 7.1 (AQ), Program LU 7.1-A (AQ), Policy LU 7.2 (AQ), Program, LU 7.2-A (AQ), Objective LU 8 (AQ), Policy LU 8.1 (AQ), Program LU 8.1-A, AQ), Program LU 8.1-B (AQ), Program LU 8.1-D (AQ) , Policy LU 8.2 (AQ), Program LU 8.2-A (AQ), Program LU 8.2-B (AQ), Policy LU 8.4 (AQ), Program LU 8.4-A (AQ) , Policy LU 9.1 (AQ), Program LU 9.1-A (AQ), Policy LU 9.2 (AQ), Policy LU 9.5 (AQ), Policy LU 14.1 (AQ), Objective LU 16, AQ), Policy LU 16.1(AQ), Policy LU 18.3 (AQ), Policy LU 19.1 (AQ), Program LU 19.1-A (AQ), Program LU 21.1-A (AQ), Policy LU 23.2 (AQ), Policy LU 25.1 (AQ), Program LU 25.1-A (AQ), Policy LU 25.3(AQ), Program LU 25.3-A (AQ), Program LU 25.3-B (AQ), Policy LU 25.4 (AQ), Policy LU 26.1 (AQ), Policy LU 27.1 (AQ), Objective LU 28, Policy LU 28.1, AQ), Policy LU 28.2 (AQ), Policy LU 28.3 (AQ), Policy CI 1.2 (AQ), Program, CI 1.2-A (AQ), Program CI 1.2-B (AQ), Policy CI 1.3 (AQ), Objective CI 2 (AQ), Policy CI 2.1 (AQ), Objective CI 3 (AQ), Policy CI 3.1 (AQ), Policy CI 3.2, AQ), Policy CI 3.3 (AQ), Policy CI 3.4 (AQ), Policy CI 3.5 (AQ), Policy CI 3.6, (AQ), Policy CI 3.7 (AQ), Policy CI 5.1 (AQ), Program CI 5.1-A (AQ), Program CI 5.1-B (AQ), Policy CI 5.2 (AQ), Policy CI 6.1 (AQ), Policy CI 6.2, AQ), Program CI 6.2-A (AQ), Policy CI 6.3 (AQ), Program CI 6.2-A (AQ), Program CI 6.2-B(AQ), Objective CI 7 (AQ), Policy CI 7.1 (AQ), Program CI 7.1-A (AQ),

Policy CI 7.2 (AQ), Program CI 7.2-A (AQ), Program CI 7.2-B (AQ), Program CI 7.2-C (AQ), Policy CI 7.4 (AQ), Policy CI 7.5 (AQ), Objective CI (AQ), Policy CI 8.1 (AQ), Policy CI 8.2 (AQ), Program CI 8.2-A (AQ), Program CI 8.2-B, Policy CI 8.3 (AQ), Policy CI 8.4 (AQ), Policy CI 8.6 (AQ), Objective CI 10, Policy CI 10.1 (AQ), Policy CI 10.2 (AQ), Policy CI 10.3, (AQ), Program HZ 2.1-D (AQ), Program HZ 2.1G (AQ), Program HZ 2.1-H, AQ), OBJECTIVE HZ 7 (AQ), POLICY HZ 7.1 (AQ), Program HZ 7.1-A (AQ), Program HZ 7.1-B (AQ), Program HZ 7.1-C (AQ), Program HZ 7.1-D (AQ), Program HZ 7.1-E (AQ), Program HZ 7.1-F (AQ), POLICY HZ 7.2 (AQ), Program HZ 7.2-A (AQ), Program HZ 7.2-B (AQ), Policy HZ 7.3 (AQ), Policy OCR 1.1 (AQ), Program OCR 1,1-A (AQ), Program OCR 1.1-B (AQ), Program OCR 1.1-C (AQ), Policy OCR 1.2 (AQ), Policy OCR 1.3 (AQ), Program OCR 1.3-A (AQ), Policy OCR 5.3 (AQ), Program OCR 5.3-A (AQ), Objective OCR 6 (AQ), Policy OCR 6.1 (AQ), Objective OCR 7 (AQ), Policy OCR 7.1 (AQ), Policy OCR 7.2 (AQ), Objective OCR 11 (AQ), Program OCR, 4.1-B (AQ), Program OCR 14.1-D (AQ), Program OCR 14.2-B (AQ).

Level of Significance After Mitigation

The project will result in significant regional air quality impacts after mitigation. Growth in population and employment will increase the emission burden of the area and feasible off-sets are minimal at this time. However, the actions identified for local government action would substantially reduce mobile source and stationary emissions associated with implementation of the General Plan.

Implementation: The City of Hanford Community Development Department through the Annexation, Subdivision Map, and project review processes shall be responsible for recommending findings of consistency with the General Plan. The Hanford Planning Commission and City Council are responsible for adopting such findings of consistency prior to project approval. Various City Departments or other agencies may request site specific studies and mitigation measures at the project review process.

Monitoring: The various implementing departments of the City of Hanford are responsible for administering the City's Site Plan Review and Subdivision Ordinance processes. An application for a Certificate of Occupancy is required prior to completing a project. The conditions of approval are checked prior to issuing a Certificate of Occupancy.

4.4. BIOLOGICAL RESOURCES

4.4.1. Environmental Setting

4.4.1.a Existing Conditions

This section of the EIR examines the biological resources of the Update to the 1994 Hanford General Plan. The Planning Area established in 1994 is proposed to be slightly modified by the addition of approximately 125 acres east of Highway 43 at Lacey Blvd. No other boundary modifications are proposed, The EIR evaluates the Updated General Plan relative to changes in the biological information available for the Planning Area and changes in General Plan Objectives, Policy, and Programs relative to biological resources.

The basis of the 1994 General Plan Update was taken from information developed by Robert B. Hansen, Hansen's Biological Consulting, who prepared a Biological Resources Survey for the Conservation Element of the Kings County General Plan (1994). That document identified and described plant communities existing in Kings County and provided an overview of special status species, which include federal and state endangered, threatened and candidate plant and animal species.

The biological survey identified 67 special status species in Kings County. Species that are commonly recognized include the blunt-nosed leopard lizard, California condor, American peregrine falcon, and San Joaquin Kit Fox. None of those habitats was recognized as existing within the Hanford Planning Area at the date the analysis was performed.

The most recent environmental documents provided to the City of Hanford (*San Joaquin Corridor Capacity Improvement, Guernsey to Shirley Double Tracking from Mile Post 959.34 to 974.18 BNSF near Hanford, California, Caltrans, July 2001; the Initial Study for Cross Valley Rail Corridor Project, San Joaquin Valley Railroad and Cross Valley Rail Corridor Joint Powers Authority, October 2001, and the Hanford Energy Park Peaker application to the California Energy Commission, 2001)* identified changes in the existing biological resources present in the Hanford Planning Area. In addition, the California Natural Diversity Data Base (CNDDB) was consulted for the area in an around the Hanford Planning Area. The identified a substantial area (including already developed portions of the City that were considered to be San Joaquin Kit Fox habitat. This represents a significant change in the environmental setting that needs to be addressed in this EIR and at the General Plan Policy level. See Figure 4.4 - 1 for a depiction of the CNDDB identification of San Joaquin Valley Kit Fox habitat.

4.4.1.a(1) Previous Planning Area Studies

In the EIR for the 1994 General Plan, a technical report was prepared to evaluate biological resources of the Planning Area (R. John Little, Ph.D., of Sycamore Environmental Consultants). This report was a reconnaissance level report that covered

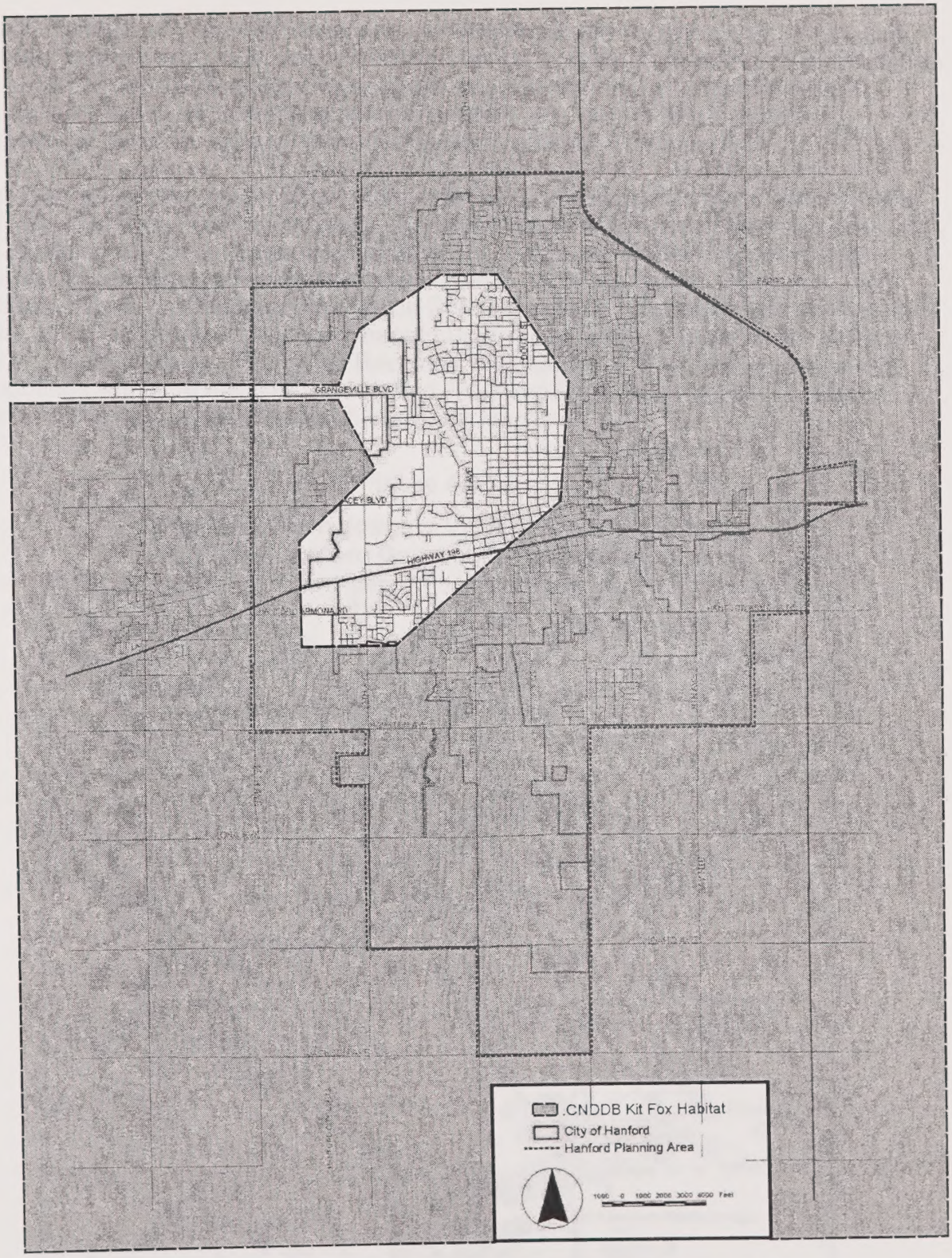


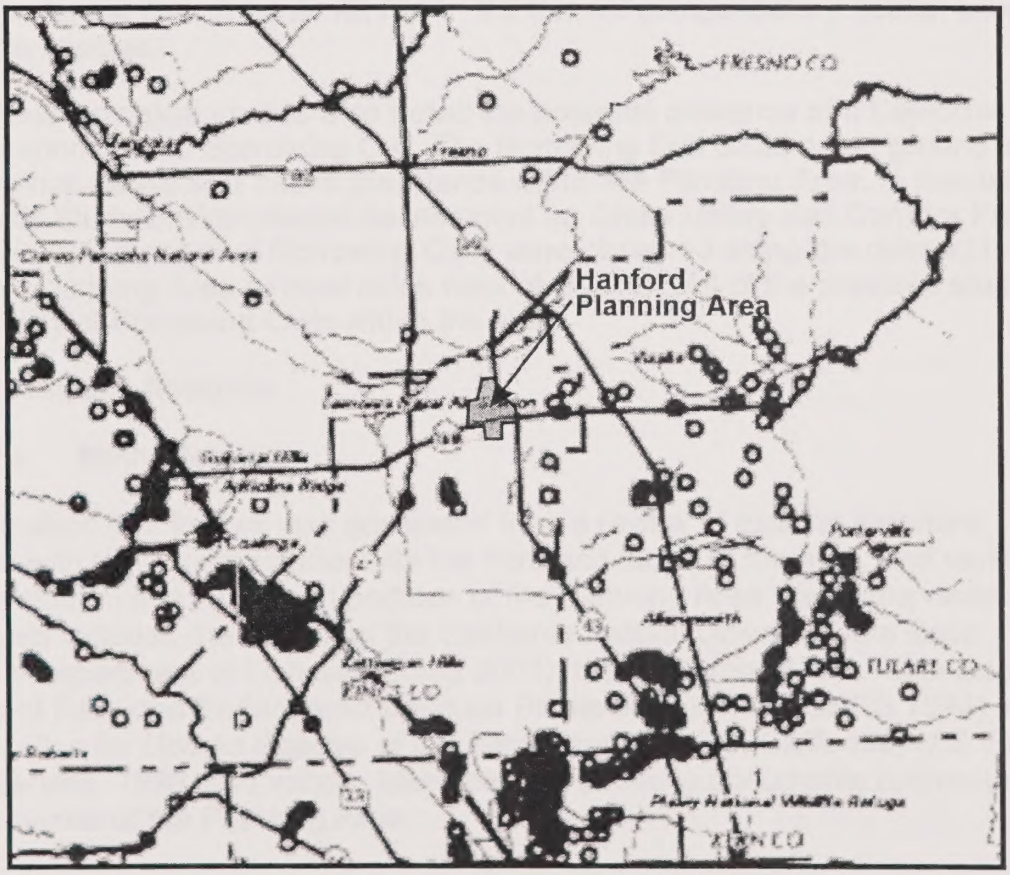
Figure 4.4 –1 California Natural Diversity Data Base Depiction of San Joaquin Valley Kit Fox Habitat In and Surrounding the Hanford Planning Area

the entire Planning Area of approximately 18,900 acres (29 square miles). That study concluded that the valley elderberry longhorn beetle, and Northwestern or Southwestern pond turtle are the only known special-status species with that could potentially be impacted as a result of implementing the General Plan. These conclusions were supported by the Kings County General Plan EIR published later in 1994.

Several biological resource studies were undertaken at the project level in the Hanford area in 2001 that identified a change in identified habitats for endangered species. The CNDDB added a substantial amount of San Joaquin Valley Kit Fox habitat in and surrounding the Planning Area some time between 1994 and 2001. There may be a correlation between this designation in the CNDDB and the publication of the *Recovery Plan for Upland Species of the San Joaquin Valley, California, U.S. Fish and Wildlife Service, 1998* (Recovery Plan). The Recovery Plan identified San Joaquin Valley Kit Fox sightings within 10 miles of the Hanford Planning Area. See Figure 4.4 - 2 for a portion of the map that identifies sightings near Hanford.

Figure 4.4 - 2

Location of San Joaquin Valley Kit Fox Sightings Near the Hanford General Plan Planning Area



Source: Recovery Plan for Upland Species of the San Joaquin Valley, California, U.S. Fish and Wildlife Service, 1998, pg. 128.

The CNDDB identifies a substantial portion of Hanford's City Limits and Planning area as San Joaquin Valley Kit Fox habitat.

While it is not completely unknown for San Joaquin Kit Fox to inhabit urban areas, most active habitat is associated annual grasslands or grassy open areas with shrub land vegetation. The species requires loose sandy soils for burrowing and a suitable prey base of mice, insects, ground squirrels, kangaroo rats, and rabbits. Very little natural grassland remains within the Planning Area. Land within the Planning Area is irrigated row crops and orchards. With a combination of heavier sedimentary soils and intensive agriculture, it is unlikely that the Planning Area would support more than itinerate or migrating Kit Foxes. None of the more recent biological analysis documented suitable habitat. However, the GWF environmental analysis did note that the area is thought to provide marginal habitat and both the San Joaquin Valley Kit Fox and burrowing owl have been known to move through marginal areas when optimal habitat is unavailable.[1] The GWF site is located in the City's Industrial Park in the southern portion of the Planning Area. The biological study for the GWF project and surrounding area (William J. Vanherweg, June 9, 1999 and February 1, 2000) noted that the site was previously disturbed vacant land. No San Joaquin Valley Kit Fox were observed, however the San Joaquin Valley Kit Fox has a home range of 1-2 square miles providing the possibility of a local fox not within a range but within travelling distance. GWF proposed mitigation for habitat loss for the San Joaquin Kit Fox in the form of compensatory habitat known to support the species.

The previous biological studies also noted the potential presence of a California species of special concern, the Borrowing Owl. The Borrowing Owl could net in ground squirrel burrows in non-native and native grasslands within the Planning Area. In one biological study (Initial Study/Environmental Assessment for Cross Valley Rail Corridor Project, October 2001) a number of Borrowing Owls were observed along the railroad tracks east of the Planning Area several miles west of Goshen. All of the previous studies note the possibility of Borrowing Owls within the area.

4.4.2. Impact Analysis

4.4.2.a Methodology

The information that follows was generated from a review of existing literature, interviews with individuals familiar with the flora and fauna of the area, and various biological studies and surveys in portions of the Planning Area. Literature reviewed for this analysis included the following: the California Natural Diversity Data Base (California Department of Fish and Game 2001), the California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California (CNPS 1994), of the *Recovery Plan for Upland Species of the San Joaquin Valley, California, U.S. Fish and Wildlife Service, 1998,* and various technical and planning documents relevant to the biotic resources of the Planning Area.

---

[1] Staff Analysis of the Hanford Energy Park Peaker Project, California Energy Commission, May 4, 2001, pg. 7.

4.4.2.b Thresholds of Significance

General plans, area plans, and specific projects are subject to the provisions of the California Environmental Quality Act (CEQA). The purpose of CEQA is to assess the impacts of proposed projects on the environment before they are constructed. For example, site development may require the removal of some or all of its existing vegetation. Animals associated with this vegetation could be destroyed or displaced. Animals adapted to humans, roads, buildings, pets, etc. may replace those species formerly occurring on a site. Plants and animals which are state and/or federally listed as threatened or endangered may be destroyed or displaced. Sensitive habitats such as wetlands and riparian woodlands adjacent to slough remnants may be altered or destroyed. These impacts may or may not be considered significant. Appendix G of CEQA, Statute and Guidelines further defines impacts to biotic resources as significant if a project will:

a) Has a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special statue species in local or regional plans, policies, or regulation, or by California Department of Fish and Game or U.S. Fish and Wildlife Service?

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulation or by the California Department of Fish and Game or US Fish and Wild Life Service?

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh vernal pool, coastal, etc. through direct removal, filling, hydrological interruption, or other means?

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community conservation Plan, or other approved local, regional, or state habitat conservation plan?

CEQA requires that significant impacts be mitigated, meaning that measures be implemented which would reduce the magnitude of the impact, preferably to a less than significant level.

4.4.2.b(1) Relevant Laws and Policies

Threatened and Endangered Species

State and Federal endangered species legislation has provided the California Department of Fish and Game (CDFG) and the U.S. Fish and Wildlife Service (USFWS) with a mechanism for conserving and protecting plant and animal species of limited distribution and/or low or declining populations. Species listed as threatened or endangered under provisions of the state and federal endangered species acts, candidate species for such listing, state species of special concern, and some plants listed as endangered by the California Native Plant Society are collectively referred to as species of special status. Permits may be required from both the CDFG and USFWS if activities associated with a proposed project will result in the take of a listed species. A Take is defined by the state of California as to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill (California Fish and Game Code, Section 86). A Take is more broadly defined by the federal Endangered Species Act to include harm (16 USC, Section 1532(19), 50 CFR, Section 17.3). Furthermore, the CDFG and the USFWS are responding agencies under the California Environmental Quality Act (CEQA). Both agencies review CEQA documents in order to determine the adequacy of their treatment of endangered species issues and to make project-specific recommendations for their conservation.

Migratory Birds

Most birds are also protected by state and federal law. The Federal Migratory Bird Treaty Act (FMBTA: 16 U.S.C., scc. 703, Supp. I, 1989) prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs.

Birds of Prey

Birds of prey are also protected in California under provisions of the State Fish and Game Code, Section 3503.5, 1992), which states that it is unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered a taking by the CDFG.

Wetlands and Other Jurisdictional Waters

Natural drainage channels and wetlands are considered Waters of the United States (hereafter referred to as jurisdictional waters). The filling or grading of such waters is regulated by the U.S. Army Corps of Engineers (USACE) by authority of Section 404 of the Clean Water Act (Wetland Training Institute, Inc. 1991). The extent of jurisdiction within drainage channels is defined by ordinary high water marks on opposing channel

banks. Wetlands are habitats with soils that are intermittently or permanently saturated, or inundated. The resulting anaerobic conditions select for plant species known as hydrophytes that show a high degree of fidelity to such soils. Wetlands are identified by the presence of hydrophytic vegetation, hydric soils (soils saturated intermittently or permanently saturated by water), and wetland hydrology according to methodologies outlined in the 1987 Corps of Engineers Wetlands Delineation Manual (USACE 1987).

All activities that involve the discharge of fill into jurisdictional waters are subject to the permit requirements of the USACE (Wetland Training Institute, Inc. 1991). Such permits are typically issued on the condition that the applicant agree to provide mitigation which results in no net loss of wetland functions or values. No permit can be issued until the Regional Water Quality Control Board (RWQCB) issues a certification (or waiver of such certification) that the proposed activity will meet state water quality standards. The RWCQB is also responsible for enforcing National Pollution Discharge Elimination System (NPDES) permits, including the General Construction Activity Storm Water Permit.

The California Department of Fish and Game has jurisdiction over the bed and bank of natural drainages according to provisions of Section 1601 and 1603 of the California Fish and Game Code (California Department of Fish and Game 1995). Activities that would disturb these drainages are regulated by the CDFG via a Streambed Alteration Agreement. Such an agreement typically stipulates that certain measures will be implemented which protect the habitat values of the drainage in question.

4.4.2.b(2) General Plan Goals and Policies Regarding Resource Conservation

Based on the 1994 General Plan EIR and subsequent Kings County General Plan, potential habitat issues were minimal for the Hanford Planning Area. However, with recent changes to identifying potential habitat and subsequent biological studies in the and around the Planning Area, a new level of General Plan policies are included in the 2001 General Plan Update. The City of Hanford proposes to adopted General Plan level policies, which address conceptually issues, related to natural resource conservation. Specifically, these policies deal with vegetation and wildlife resources, threatened and endangered species, wetlands, and aquatic habitat. These policies are mitigation measures cited in this EIR as mitigation for the potential impacts associated with potentially significant impacts to the environment relevant to biological resources.

4.4.2.c Impacts

Wildlife Habitat

No undisturbed, natural habitat remains within the Planning Area. All areas of the Planning Area observable from public roads are currently in agricultural, residential, or non-residential uses. However, this does not mean that disturbed natural habitat could not support threatened or endangered species. Threatened and endangered species are known to use fallow fields when little natural habitat remains. Implementing the

General Plan would contribute cumulatively to the loss of open space through the conversion of agricultural fields and orchards to residential and non-residential uses.

Approximately 76 acres of slough remnants occur within the Planning Area. Slough remnants are the most important natural wildlife habitat feature remaining within the Planning Area. Portions of the slough remnants contain riparian habitat, but all remnants are substantially degraded through filling, burning, and reduction in hydraulic capacity.

Sensitive Species Likely to Occur in the Hanford Planning Area

The California Department of Fish and Game's CNDDB for the Ramnoy and Hanford quadrangles were searched for data relative to listed species. Species listed earlier in the 1994 General Plan EIR as well as recent environmental analyses are listed in the following table.

Table 4.4 - 1

List of Special Status Plant and Animal Species that Could Occur in the Hanford Planning Area

Scientific Name	Common Name	Status Federal/State	Typical Habitat	Occurrence Potential
Vulpes macrotis mutica	San Joaquin Kit Fox	Endangered/ Threatened	Annual grasslands or grassy open areas with shrub land vegetation. This species requires loose sandy soils for burrowing and a suitable prey base	**Unlikely.** According to the CNDOB, the closest occurrence of this species is 3 miles northwest of Laton. There are several small disconnected natural grasslands remaining in the southern portion of the Planning Area. The probability of this species occurring within the Planning Area is low in intensely farmed areas and urban uses.
Dipodomys nitraoides exilis	Fresno Kangaroo Rat	Endangered/ Endangered	The original geographic range for this species extended from south of Merced County to central Fresno County.	**Unlikely.** Suitable habitat is most likely lacking in the Planning Area for this species resulting from intensive agricultural and urban uses.
Dipodomys nitraoides nitraoides	Tipton Kangaroo Rat	Endangered/ Endangered	This species is associated with alkaline sink habitat	**Unlikely**. Suitable habitat is most likely lacking in the Planning Area for this species resulting from intensive agricultural and urban uses.

Scientific Name	Common Name	Status Federal/State	Typical Habitat	Occurrence Potential
Buteo swainsoni	Swainson's hawk	Partners in Flight Priority Bird Species/ Threatened	Typical habitat of the Swainson"s hawk is open desert, sparse shrub lands, grassland, or crop land containing scattered, California's Central Valley, the nests are typically at the edge of a narrow band of riparian vegetation, in isolated oak woodland, and in lone trees, roadside trees, or farmyard trees, as well as in adjacent urban residential areas (England et al. 1989).	**Possible.** There are roosting and nesting sites north of Corcoran and south of Hamblin. This species could move through the Planning Area as a transient or forage during late spring, summer and early fall. The loss of farmland to urban development could reduce foraging habitat. The impact would be a cumulative loss of potential foraging area..
Desmocerus californicus dimorphus	Valley Elderberry Longhorn Beetle	Threatened/ None	This beetle is associated with elderberry bushes *(Sambucus* spp.) in California's Central Valley during its entire life cycle. The adults emerge from pupation inside the wood of these trees in the spring as their flowers begin to open. The adults eat the elderberry foliage until about June when they mate. Upon hatching the larvae then begin to tunnel into the tree where they will spend 1-2 years eating the interior wood which is their sole food source.	**Possible**. No Elderberry bushes have been observed within the Planning Area. However, an exhaustive study was not completed and isolated plants may exist associated with slough remnants or other drainages. There is a low probability of Elderberry bushes in intensively farmed areas.
Athene cunicularia	Burrowing Owl	Species of Concern/ None	Open fields, and along berms where ground squirrel burrows occur.	**Possible**. Borrowing Owls have been identified east of the Planning Area. There are fallow fields within the Planning area where squirrel burrows occur. Reconnaissance surveys at the project level are necessary. Loss of habitat is may result.

Scientific Name	Common Name	Status Federal/State	Typical Habitat	Occurrence Potential
Ambystoma californiense	California tiger Salamander	Candidate/ none	This species utilizes temporary rain pools and permanent waters of the grasslands and open woodlands of low hills and valleys.	**Unlikely**. Suitable habitat is most likely lacking in the Planning Area for this species resulting from intensive agricultural and urban uses. No remaining vernal pools have been identified within the Planning Area..
Scaphiopus hammondii	Western spadefoot	none/ DFG protected	This species utilizes temporary rain pools or slow moving permanent waters for breeding. Non-breeding habitat consists of open vegetation characterized by short grasses.	**Unlikely**. Suitable habitat is most likely lacking in the Planning Area for this species resulting from intensive agricultural and urban uses. No remaining vernal pools have been identified within the Planning Area
Clemmys marmorata	Western pond Turtle	None/ None	This species is associated with ponds, streams, and ditches.	**Possible.** This species is known to occur in the People's Ditch. Therefore, any work near or in this channel should take measure to protect this species during construction. These measures may include exclusion fencing during construction.
Branchinecta lynchi	Vernal pool fairy shrimp	Threatened/ None	Vernal Pool, small pond habitat	**Unlikely**. Suitable habitat is most likely lacking in the Planning Area for this species resulting from intensive agricultural and urban uses. No remaining vernal pools have been identified within the Planning Area.
Lepidurus packardi	Vernal pool tadpole shrimp	Endangered/ None	Vernal Pool, small pond habitat	**Unlikely**. Suitable habitat is most likely lacking in the Planning Area for this species resulting from intensive agricultural and urban uses. No remaining vernal pools have been identified within the Planning Area.
Orcuttia inaequalis	San Joaquin valley orcutt grass	Threatened/ Endangered	Vernal Pools	**Unlikely**. Suitable habitat is most likely lacking in the Planning Area for this species resulting from intensive agricultural and urban uses. No remaining vernal pools have been identified within the Planning Area.

Scientific Name	Common Name	Status Federal/State	Typical Habitat	Occurrence Potential
Orcuttia pilosa	Hairy orcutt grass	Endangered/ Endangered	Vernal Pools	**Unlikely**. Suitable habitat is most likely lacking in the Planning Area for this species resulting from intensive agricultural and urban uses. No remaining vernal pools have been identified within the Planning Area.
Pseudobahia bahifolia	Hartweg's golden sunburst	Endangered/ Endangered	Grasslands and open woodlands in clay soils	**Unlikely**. Suitable habitat is most likely lacking in the Planning Area for this species resulting from intensive agricultural and urban uses. No remaining vernal pools have been identified within the Planning Area.

Coding and Terms
Federal Species of Concern: "taxa for which the U.S. Fish and Wildlife Service has information that indicates proposing to list the taxa as endangered or threatened is possibly appropriate, but for which substantial data on the biological vulnerability and threats are not currently known or on file to support the immediate preparation of rules." (Arnold). All of these species have a limited range. In fact, some species are limited to the San Bernardino Mountains area, however, they are locally common.
State Species of Special Concern: An administrative designation given to vertebrate species that appear to be vulnerable to extinction because of declining populations, limited acreages, and/or continuing threats.
State Plant Rankings: S1 - less than 6 element occurrences, or less than 1,000 individuals, or less than 2,000 acres S2 – 6 to 20 element occurrences, or between 1,000 and 3,000 individuals, or between 2,000 and 10,000 acres S3 - 21 to 100 element occurrences, or between 3,000 and 10,000 individuals, or between 10,000 and 50,000 acres S4 - No Threat Rank S5 - No Threat Rank
R-E-D Code: .1 - very threatened .2 - threatened .3 - no current threats known

General Plan Policies for Loss of Wildlife Habitat

The General Plan conserves open space through the creation of a greenbelt/open space buffer around the perimeter of the City (Policy OCR 1.1).

The General Plan encourages the retention of slough remnants and water courses within the Hanford Planning Area as components of a storm drainage retention program (Policy OCR 7.1 (AQ)). In addition, where appropriate and feasible, the City intends to establish permanent mechanisms to protect wetlands and riparian corridors (Policy OCR 7.3).

Because there are differences in agricultural practices on non-urban land within the Planning Area ranging from intensively cultivated and irrigated land to fallow land, future project proposals will need to assess the value of potential habitat proposed for development depending on the level of intensive agricultural practices. Those more intensively cultivated and irrigated parcels may only require reconnaissance level documentation, while fallow fields may require on-site analysis. Pre-construction site surveys may be required where the presence of Borrowing Owl habitat is present. Other projects may require consultation with the U.S. Fish and Wildlife Service, Core of Engineer, or permits from the California Fish and Game Department. Additional policies and programs have been added to the Hanford General Plan requiring such review as follows:

Policy OCR 7.7

Projects larger than 5 acres in size located in potential habitat area as described in the California Natural Diversity Data Base shall undertake a reconnaissance level biotic survey to determine the likelihood of threatened or endangered species primarily San Joaquin Valley Kit Fox and Borrowing Owls. Such report shall be included in the application for any development project that will convert agricultural or fallow land to any urban use. Where the presence of any threatened or endangered species is probable appropriate mitigation measures as may be defined by the State of California or Federal Government shall be instituted.

Program OCR 7.7-A

Monitor environmental mitigation measures established by program and project EIR's to protect endangered wildlife and their habitats. Mitigation measures may include the permanent protection when ever possible consistent with state and federal regulations. Restoration or relocation of wildlife habitat shall be considered if it is consistent with state and federal regulations and protection of the habitat is found to be physically and economically infeasible.

Special-Status Plant and Wildlife Species

The agricultural habitats within the Planning Area provide foraging habitat for several species of resident raptors such as red-tailed hawk and kestrels, and possibly for other species. In addition, the many tall, eucalyptus trees in the Planning Area provide potential nesting habitat for raptors. Swainson's Hawk have been observed near the Planning Area (7 miles north of Corcoran and 4 miles southeast of Hamblin)[2] Implementation of the General Plan would potentially adversely affect these sensitive wildlife species by removing either breeding or foraging habitat.

Agricultural ponds and other bodies of water in the Planning Area, such as Peoples Ditch, could potentially provide habitat for Northwestern or Southwestern pond turtle.

---

[2] Staff Analysis of the Hanford Energy Park Peaker Project, California Energy Commission, May 4, 2001, pg. 7.

Portions of some slough remnants may contain Mexican elderberry, the food plant of valley elderberry longhorn beetle, a federally-listed threatened invertebrate species. Special-status avian species, such as ferruginous hawk could occur periodically as transient species. In addition, other special-status species such as Fresno kangaroo rat and Tipton kangaroo rat are also known to use fallow fields. While little natural habitat remains in the Planning Area there are less intensively farmed areas in the southern part of the Planning Area that could be potential habitat. Thus, the valley elderberry longhorn beetle, and Northwestern or Southwestern pond turtle are the only known special-status species with that could potentially be impacted as a result of implementing the General Plan.

General Plan Policies for Special-Status Plant and Wildlife Species

The Open Space, Conservation, and Recreation Element of the General Plan contains several policies and actions that help conserve biological resources. For example, the General Plan encourages the retention of slough remnants and water courses within the Hanford Planning Area as components of a storm drainage retention program (Policy OCR 7.1 (AQ)). In addition, where appropriate and feasible, the City intends to establish permanent mechanisms to protect wetlands and riparian corridors (Policy OCR 7.3). As a result, the slough remnants are not expected to be directly affected by implementation of the General Plan. Slough remnants may actually receive greater protection under the policies of the General Plan than at present.

Prior to tree removal, the City will require surveys to be conducted to determine if nests of any raptors occur which are state or federally-listed, candidate, or species of special concern (Policy OCR 7.7). In the event that such nests are located on a project site, the applicant and/or City will consult with California Department of Fish and Game to develop appropriate mitigation measures.

To prevent potentially significant impacts occurring to Valley elderberry longhorn beetles, the City will require surveys be conducted to identify food plants (i.e., Mexican elderberry shrubs), prior to any physical alteration of habitat within the remnant sloughs (Policy OCR 7.8).

4.4.2.d Mitigation Measures

General Plan policies and programs listed in the prior section will reduce significant impacts associated with the General Plan to a less than significant level.

Level of Significance After Mitigation

Less than Significant

Implementation of the General Plan would increase potential impacts to biological resources and would contribute cumulatively to the loss of open space through the conversion of agricultural fields and orchards to residential and non-residential uses. However, no undisturbed, natural habitat remains within the Planning Area.

Mitigation Implementation and Monitoring Responsibility

Implementation: The City of Hanford Community Development Department has the responsibility to process all project applications under the jurisdiction of the City. The Department shall be responsible for the implementation of the mitigation measures through the Building Permit, Site Plan Review, and/or subdivision review process.

Monitoring: The Community Development Department is responsible for administering the City's Site Plan Review and Subdivision Ordinance processes. An application for a project is required to meet regulations and policies of the City. The Department is required to make findings of consistency with the General Plan for proposed tentative subdivision maps.

4.5. CULTURAL RESOURCES

4.5.1. Environmental Setting

In 1993, a records search of archaeological sites located in the Planning Area was conducted by the Southern San Joaquin Valley Information Center at California State University Bakersfield. According to the Information Center no cultural resources were identified within Planning Area. This survey may not, however, have accurately portrayed all the cultural resources in the Planning area because as yet undiscovered cities may exist. Urbanized areas are considered the least sensitive primarily because existing development destroys any existing sites. Very little archaeological survey work has been done to date. Greater sensitivity exists for potential archeological sites in the western and southern area parts of the Planning Area. This area has not yet been surveyed, however slough remnants exist which are a common characteristic of archaeological sites. Additionally, sites may occur on agricultural land within the Planning Area. Many of the sites in the southern San Joaquin Valley and potentially within the Planning Area, are in plowed fields where 12-18 inches of soil may be disturbed with intact archaeological deposits below the distributed soil.

Archaeological sites are defined as locations containing significant levels of resources that identify human activity. Generally a site is defined by a significant accumulation or presence of one or more of the following: food remains, waste from the manufacturing of tools; tool concentrations i.e. obsidian; alignments of stones; modification of rock surfaces i.e. mortars; unusual discoloration or accumulation of soil i.e. yields past fire activity; or skeletal remains. Archaeological sites are classified into three categories: prehistoric, ethnographic and historical. Prehistoric sites are resources for which there is no evidence of Euro-Americans contract. Ethnographic sites are Native American sites associated with the early settlement period by Euro-Americans. Historical sites are associated with the advent of written documents and are considered Euro-American sites.

Archaeology

The date of the earliest human occupation of North America, and California, is subject to debate. However, it is widely acknowledged that by 12,000 to 8,000 years ago people inhabited North America, as evidenced by, in particular, the fluted points they left behind. In the Central Valley, according to Moratto (1984:88; 93), it is likely that the Fluted-Point Tradition gradually evolved into Western Pluvial Lakes Tradition, characterized by the absence of groundstone artifacts and by a distinctive chipped stone toolkit, as the native peoples adapted to the lake and marsh environment of the region. The former shorelines of Tulare Lake to the south of Hanford have yielded numerous artifacts ascribable to both the Fluted-Point tradition and the Western Pluvial Lakes Tradition *(ibid.* :81).

Archaeological investigations in the Central Valley began in earnest in the 1930s and attempts were made to understand the temporal sequence of occupation in the area based on the archaeological record. In 1939, one of the most influential temporal schemes was proposed for the region (Lillard et al. 1939), defining three archaeological

periods based on mortuary practices and associated ornamental artifacts: the Early Period, the Middle Period, and the Late Period (Moratto 1984:180). In the early 1950s, Beardsley (1954) refined this earlier scheme, also on the basis of burial practices and associated grave goods, and established the three primary horizons-Early, Middle, and Late what is known as the Central California Taxonomic System (Nelson 2000:10).

More recently, archaeologists have been developing sequences for more localized areas, as well as concepts for dealing with cultural units without temporal implications (Moratto 1984:201). However, the three periods mentioned above, along with the earlier Archaic Period, still provide a useful framework as general indicators of cultural stability and change over time. According to Nelson (2000:10), the Early Period is now commonly recognized as dating from 2,500 to 500 BC, the Middle Period from 500 BC to AD 300, and the Late Period from AD 300 to 1840.

Ethnography

The Hanford area is situated in a region that is generally acknowledged as the traditional homeland of the Southern Valley Yokuts, which extends south from the southern end of the San Joaquin Valley to the Tehachapi Mountains. The following ethnographic discussion of the Southern Valley Yokuts is based mainly on Wallace (1978).

The biological family formed the basic domestic and economic unit in the Southern Valley Yokuts society, although the patrilineal, exogamous, totemic lineage was also a key grouping. Lineages in the northern portion of the tribal territory, where Hanford is located, were affiliated to one of two patrilineal moieties. No overall political unity existed among the Southern Valley Yokuts, however, and tribal lands were owned collectively, with resources shared by all members of the localized groups.

The Southern Valley Yokuts lived around the various rivers, lakes, sloughs, and the seasonal marshes Located in the valley, subsisting mainly on fish, waterfowl, shellfish, roots, and seeds, baskets were important in securing and processing foods, along with nets, sinew-backed bows, stone tipped arrows, and stone scrapers. Stone mortars, wooden mortars, and pestles were obtained through trade, as were the lithic materials used to make stone tools. Perforated marine shell disks were used as currency to acquire these items. There is no evidence of clay vessel manufacturing among the Southern Valley Yokuts, and the crafts of fashioning wooden and stone tools were poorly developed.

The native life-style of the Southern Valley Yokuts received little influence from early, casual contacts w the Spaniards in the late 1700s and early 1800s. In 1833, however, an epidemic of introduced disease devastated the native population with an estimated 75% mortality rate. After the annexation of California by the United States in 1848, the decline of Southern Valley Yokuts population and culture accelerated as Euroamerican settlers overran the tribal territory and displaced the native people. The Southern Valley Yokuts offered little resistance, and instead allowed them selves to be interned on the Tejon Reservation and later on the Tule River and the Santa Rosa Reservations.

History

The region around Hanford received its first European visitors between 1804 and 1810, when Gabriel Moraga, a Spanish army officer, led a series of expeditions into the San Joaquin Valley in search of a mission site. In 1827, Jedediah Smith, the famed trapper and explorer, became the first American to set foot in the San Joaquin Valley. Despite these early explorations, no non-Indians are known to have settled in the vicinity during the Spanish and Mexican Periods in California history (1769-1848). After the American annexation, almost the entire San Joaquin Valley, along with the southern Sierra Nevada and the northwestern Mojave Desert, was incorporated in 1850 into the mammoth County of Mariposa, which was largely unpopulated except for the gold mining camps in the Mother Lode country.

The oldest community near Hanford and indeed anywhere between Stockton and Los Angeles was Visalia, which was founded in 1852, the same year that Tulare County was created. A year later, with a voting population of 48, Visalia became the county seat, wresting that honor from nearby Woodsville (Visalia Convention and Visitor Bureau 2000:15). The Lemoore area was first settled in 1859, and the town site was subdivided by Lavern Lee Moore in 1872 (Gudde 1998:208; City of Lemoore 2001). By 1875, Lemoore had gained a sufficient population to warrant the establishment of a post office (Gudde 1998:208).

In contrast to the spontaneous genesis of Visalia and Lemoore, the Hanford area; owes its origin primarily to the coming of the Southern Pacific (now Union Pacific) Railroad in the 1870s, when the surrounding area vas dotted with a growing number of small farms. Southern Pacific constructed the Coalinga branch line in 1877 (Clark 1992:67; Gudde 1998:17, 149, 174). With the gradual settlement and development of the San Joaquin Valley, Kings County was created in 1893.

Throughout the late 19th century, railroad and irrigation had a crucial influence on the growth of the region surrounding Hanford. In the early 1890s, spurred by popular resentment to the SP's railroad monopoly in California, Hanford residents played a leading role in bringing about a second railroad through the San Joaquin Valley (Clark 1992:68). The resulting San Francisco and San Joaquin Valley Railway was completed through Hanford in 1897 and, a year later, became a part of the SP's chief competitor, the Atchison, Topeka and Santa Fe Railway (Gustafson and Serpico 1996:11-13, 93).

The earliest recorded irrigation effort in the vicinity of Hanford dates to as early as 1854, when a group of settlers cut a small ditch from Upper Mill Creek near Visalia (Small and Smith 1926:567). In Kings County, the three most important irrigation enterprises on the southern bank of he Kings River-the Lower Kings River Ditch Company, the Peoples Ditch Company, and the Last Chance Water Ditch Company were all organized in 1872-1873, and their main irrigation canals were constructed between 1870 and 1874 *(ibid.;* DWR 1929:238-241). Around the same time, the Lakeside Ditch Company, also organized in 1873, built a ditch in 1875 from Cross Creek, a branch of the Kaweah River (Small and Smith 1926:567). The Lower Kings River Ditch Company was superseded in

1902 by the Lemoore Canal and Irrigation Company (DWR 1929:241), and all four of these enterprises continue to operate today.

Previous Cultural Resources Studies

Records on file at the Southern San Joaquin Valley Information Center indicate only two archaeological sites have been recorded within or adjacent to the Hanford area, each consisting of a sparse scatter of prehistoric or historical artifacts. Outside the Hanford area, one other site, representing an old irrigation ditch, has been recorded within a half-mile radius. Taken together, the results of the records search appear to suggest that Hanford and its surrounding area are fairly low in sensitivity for cultural resources

Cultural and historic resources within the community consist primarily of historic public and private buildings within or in proximity to the original townsite, including the Central Business District, China Alley and residential areas to the north.

Sierra Valley Cultural Planning provided an assessment of the older neighborhoods undergoing transition near the Downtown. The assessment determined that Growth began in the Hanford area following the expansion of the Southern Pacific Railroad in 1877 west from Goshen to Coalinga. By 1900, Hanford's residential area had expanded northward to Katherine Street. Many residential structures dating to this early period and subsequent expansion of settlement within the City boundaries remain and include historic groupings which represent variations on a specific style and period of development ranging from pre-1900 Victorian to early to mid-twentieth century Craftsmen and various period revival styles.

Based on a preliminary survey of structures contained within the Study Area boundaries, the following architectural styles have been identified. These include Victorian (Queen Anne/Stick/Eastlake), Italianate, Colonial Revival, Bungalow, Craftsmen Bungalow, Mission Revival and other Period Revival (such as Tudor). In addition to these recognized architectural styles is use of combinations of stylistic elements grafted onto local vernacular styles, which reflect local utilitarian needs. A common example of this is the two-story, L-shaped farmhouse with a corner porch.

As commercial land use expands northward from the downtown area, predominately single-family residential areas are being impacted through conversion of residential structures to commercial use that may include introduction of elements that are often incompatible with residential neighborhoods. Of particular note are the use of signs, parking areas, and landscape elements that are generally incompatible with maintenance of historic integrity and feeling of a neighborhood. Parking is probably the single most challenging aspect of adaptive reuse for commercial businesses in residential neighborhoods.

Adaptive reuse of residential structures can occur without altering the historic character of a neighborhood provided guidelines are put in place which provide directions for commercial conversion.

Existing policy to enhance and preserve historic structures throughout the community is imbedded in the City's development policies. This includes expansion of the boundaries of the Historic Preservation District to embrace additional acreage where appropriate. Three structures within the City of Hanford have been listed on the National Register of Historic Places:

- Hanford Carnegie Library, 109 East 8th Street. Listed on 12/17/81, Reference No.81000152
- Kings County Courthouse, 114 West 8th Street. Listed on 9/21/78, Reference No.78003063
- Toaist Temple, No. 12 China Alley. Listed 6/13/72, Reference No. 72000226

Recent environmental analysis performed for the BN &SF track widening and the SJVRR track bed restoration have identified the potential historical value of canals within the Planning Area.

- Lakeside Ditch

Constructed in 1875, Lakeside Ditch played an important role in the development of Kings County. Pending further documentation, the entire Lakeside Ditch system is likely to prove eligible for listing in the National Register under Criterion A if the system retains good historic integrity. Lakeside Ditch, therefore, is a contributing element of a potentially significant historic linear feature and qualifies as a historic property.

- Peoples Ditch

Constructed in the early 1870s, People's Ditch was one of the most important irrigation works in the early history of Kings County. Pending further documentation, the entire Peoples Ditch system is likely to prove eligible for listing in the National Register under Criterion A, if the system retains good historical integrity. People's Ditch, therefore, is a contributing element of a potentially significant historic linear feature, and qualifies as a historic property.

- Last Chance Ditch

Like People's Ditch, the 1874-vintage Last Chance Ditch system was one of the most important irrigation works in the early history of Kings County. Pending further documentation, the entire system may prove eligible for listing in the National Register under Criterion A.

Historic Resources Ordinance

The City of Hanford has established policy regarding historic buildings within the Historic Resources Ordinance, Title 9, Chapter 4, Article 25 of the Hanford Municipal Code, which was adopted on August 22, 1980. The Ordinance also establishes an Historic Resources Overlay District within the downtown area. The Commission's responsibilities include the review of any proposals affecting historic districts or historic

structures, periodic evaluation of the city's historic resources, and general assistance to the City as well as property owners regarding the preservation of historic structures. Authority for designating an Historic Structure of Historic District rests with the City Council, and the Ordinance establishes the criteria by which the Council would make such decisions. The Ordinance also establishes the requirement for a Historic Resource Permit to perform modifications to exteriors of buildings within a designated historic zone or a designated historic structure. In cases of major modifications, the permit shall be reviewed by the City Staff and approved or denied based on criteria within the Historic Resources Ordinance.

Neighborhoods in Transition

Areas of potentially historic buildings outside of the Historic Resources Combining District are currently undergoing transition from residential use to commercial and office use. Of primary concern is the Redington, Irwin, and Douty Street area south of Malone Street. The City's General Plan Land Use Element contains policies and programs directed at preserving or restoring the character of these buildings while allowing transition to office uses.

4.5.2. Environmental Analysis

4.5.2.a Methodology

Information contained in this Section of the EIR has been complied from a number of reports including the 1993 records search of archaeological sites located in the Planning Area was conducted by the Southern San Joaquin Valley Information Center at California State University Bakersfield, Field work by Sierra Valley Cultural Planning in the older neighborhoods of Hanford, and recent environmental work for the BN & SJ and SJVRR route studies.

4.5.2.b Thresholds of Significance

A significant impact would occur if the project would:

a) Cause a substantial adverse change in the significance of a historical resource as defined In §15064.5?

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

c) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?

d) Disturb any human remains, including those interred outside of formal cemeteries?

4.5.2.c Impacts

Development associated with implementation of the General Plan has the potential to adversely impact undiscovered archaeological resources in the Planning Area. Because of the sloughs that once existed in the Planning Area and the subsequent agricultural disruption of the natural landform, there is a potential that undiscovered archaeological sites might be present. Development construction activities may require excavation in areas near obliterated sloughs or near slough remnants in the Planning Area. Archaeological sites may be uncovered. The Federal and State agencies have adopted policies with regard to actions that must be taken if such sites are unearthed during construction processes. The City of Hanford has contained those policies in the General Plan. Subsequent site specific archaeological analysis may be required on proposed development sites where there is a likelihood of archaeological sites.

Similarly, active and inactive irrigation canals may have historic value. Where development is proposed that may impact an active or remnant of a potentially historic irrigation system a cultural resource investigation should be undertaken. The impact of designation of the "People's Ditch", "Lakeside Ditch", and "Last Chance Canal" as a historical resource should be dealt with on a project by project basis. If a proposed project has the potential to alter qualities that make the ditch eligible as a historic resource, then further treatment may be warranted. It may only require that the portion of the ditch within the project area be documented. I may not have to be preserved.

The integrity of pipelined and undergrounded ditches in the City have been significantly altered, and no further analysis or consideration is necessary. Storm drain systems do not typically require further consideration. It is usually enough to identify the ditch, document it, and go on.

Location of ditches in undeveloped areas that are planned for urban scale development must be evaluated on a project-by-project basis, identify and document the features, determine whether they may be significant, assess their integrity. If they are indeed significant and eligible for listing on the National Register, and it is infeasible to preserve them in place, them they should be sufficiently documented before destruction. Caltrans has prepared historic contexts for evaluation of these features, so evaluation and documentation should not require extensive (and costly) cultural resources work. In areas where ditches transverse undeveloped land designated as open-space, unless the ditches pose a safety or health hazard, they should be preserved as is.

Transition of older neighborhoods has the potential to adversely impact existing historical resources in the Planning Area. As commercial land use expands northward from the downtown area, predominately single-family residential areas are being converted into commercial or office uses. While not every structure is historical, they do lend to the character of the neighborhoods. Conversion activities may include introduction of elements that are often incompatible or inconsistent with historical character of the neighborhoods. Of particular note are the use of signs, parking areas, and landscape elements. Parking is probably the single most challenging aspect of adaptive reuse for commercial or office businesses in residential neighborhoods.

Adaptive reuse of residential structures can occur without significantly altering the historic character of a neighborhood. The General Plan provides guidelines for these changing conditions.

4.5.2.d Mitigation Measures

In addition to halting construction to allow evaluation if archaeological or paleontological artifacts are found, the General Plan Land Use, and Open Space/Conservation Elements contains Policies that reduce the potentially significant impacts to a level of less than significant. Those are: Policy LU 8.5, Policy LU 8.6, Program LU 8,6-A through G, Policy 8.7, Objective LU 14, Policy LU 14.1, Policy LU 14.2, and Programs LU 14.2 - A & B; Objective OCR 12, Policy OCR 12.1, Programs OCR 12.1 - A through C, Policy OCR 12.2, Programs OCR 12.2 - A & B.

Level of Significance After Mitigation

Less than Significant.

Mitigation Implementation and Monitoring Responsibility

Implementation: The City of Hanford Community Development Department through the Annexation, Subdivision Map, and project review processes shall be responsible for recommending findings of consistency with the General Plan. The Hanford Planning Commission and City Council are responsible for adopting such findings of consistency prior to project approval. Various City Departments or other agencies may request site specific studies and mitigation measures at the project review process.

Monitoring: The various implementing departments of the City of Hanford are responsible for administering the City's Site Plan Review and Subdivision Ordinance processes. An application for a Certificate of Occupancy is required prior to completing a project. The conditions of approval are checked prior to issuing a Certificate of Occupancy.

4.6. GEOLOGY AND SEISMIC HAZARDS

4.6.1. Environmental Setting

4.6.1.a Geology and Soils

The General Plan Area is located in the northeastern part of Kings County. Kings County is slightly south of the geographic center of California and occupies part of the San Joaquin Valley and a portion of the eastern slope of the California Coast Range. The General Plan Area is located within the Great Valley geomorphic province of California. The Great Valley geomorphic province is located between the foothills of the Sierra Nevada on the east and the Coast Ranges on the west. Large, gently sloping alluvial (stream deposited) fans cover the eastern side of the valley and were formed by rivers that flow southwestward from the Sierra Nevada. The City of Hanford is about equidistant (35 miles) from the Sierra Nevada and the Coast Range.

4.6.1.b Seismic Hazards

4.6.1.b(1) Seismicity

The General Plan Area is subject to relatively low seismic hazards compared to many other parts of California. No major geologic structures have been mapped in the vicinity of the General Plan Area (Jenkins, 1966). The primary seismic hazard is ground shaking produced by earthquakes generated on regional faults lying outside the immediate vicinity of the General Plan Area. Active faults are defined as having had movement along their trace at least once during the last 11,000 years. The General Plan Area does, however, lie within the zone of influence of several major active fault systems. As illustrated in Figure 4.6 - 1, Earthquake Fault Lines, the nearest known earthquake faults are located approximately 60 miles to the east of Hanford in the Sierra Nevada, and in the eastern Coast Ranges areas approximately 50 miles to the west. Strong ground motion can cause damage to structures or facilities not specifically designed and constructed to withstand such motion. Hanford is within Uniform Building Code Zone 3, which requires moderate earthquake protection for major structures.

Table 4.6 - 1 lists the historic maximum and probable maximum earthquakes for the major faults that could cause ground shaking in the General Plan Area.

* San Andreas Fault - The San Andreas fault is probably the most important fault in determining the level of the hazard from ground shaking in the General Plan Area. The long history of movements and earthquakes on this fault indicates that it is the most likely source of a damaging earthquake for most of the area. However, the San Andreas fault is not located within the General Plan Area, so it does not represent a hazard with respect to ground rupture.

* Owens Valley Fault Ground - A complex group of faults located along or near the base of the steep, east slope of the Sierra Nevada is herein termed the Owens Valley fault group. All known active or potentially active faults within the group are northeast of the General Plan Area, and does not present a hazard from ground rupture in the area.

LEGEND

Fault

Fault, where approx. located

Fault, where inferred

Scale

0 3 6 Miles

NORTH

Figure 4.6- 1, Earthquake Fault Lines

Table 4.6 - 1

Regional Faults

Fault	Distance	Max. Historic(Date)	Max. Probable
Coalinga	50 mi.	6.4 (1983)	Unknown
San Andreas Fault	65 mi.	7.9 (1857) (1)	7.7 (1)
Owens Valley	80 mi.	7.8 (1872) (1)	7.4 (1)
White Wolf Fault	85 mi.	7.9 (1952) (2)	7.2 (1)

1 Moment Magnitude.

2 Richter Magnitude.

Note: The Richter magnitude in the scale originally developed by Charles Richter for earthquakes occurring in southern California. The scale is based on the maximum amplitude of the seismic waves recoiled on a wood-Anderson seismograph. The scale baa been adopted worldwide despite the fact that other regions will differ in their wave propagation characteristics and the use of other types of seismographs. The moment magnitude scale in a relatively recent development which better reflects the size of an earthquake because it is computed from the seismic moment. The moment is a measurable quantity of the area involved in the fault rupture and the amount of fault rupture and the amount of fault displacement that occurred in the earthquake.

Sources: Hanka and Kanamori (1979), Stover (1983) Toppozada Ct, al. (1981), and Wesnousky (1986)

However, this fault group has been the source of numerous earthquakes in historic time, including the 'great" earthquake of 1872, and it must be considered as second only to the San Andreas fault as a source of earthquakes that could cause damage in the area.

* White Wolf Fault - The active White Wolf fault is also located outside the General Plan Area and is unlikely to be a hazard with respect to ground rupture. This fault was little known until 1952 when movement along it generated the damaging series of earthquakes of that year in the Bakersfield area. The shaking from this series of shocks was the most severe in the General Plan Area since the detailed compilation of intensity data was begun by the Coast and Geodetic Survey in 1928.

The ground motion parameter most frequently used for seismic engineering is maximum ground acceleration given as a percent of the acceleration of gravity). In general, maximum ground acceleration is a function of the distance from the earthquake source and the depth of unconsolidated alluvial deposits. Ground acceleration generally decreases with increasing distance from the earthquake source and increases with increasing thickness of unconsolidated alluvium. Unconsolidated alluvium generally amplifies the magnitude of ground shaking. A maximum probable earthquake on any of the three major faults closest to the General Plan Area would produce a maximum ground acceleration in the General Plan Area of about 0.1g (Mualchin and Jones 1987.)

The Hanford area has experienced several noticeable shocks from earthquakes over the past few years. The most serious recent quake occurred in the spring of 1983 near

Coalinga, but the distance of the earthquake from Hanford was too great to cause local damage. The Coalinga quake registered 6.4 on the Richter Scale and occurred on the Coalinga Fault, however, no surface rupture was evident. The peak maximum ground acceleration for an event occurring on the fault is a force of 0.19 gravity. Similar recent quakes with epicenters near the Mammoth area more than 100 miles to the northeast on the eastern slopes of the Sierra Nevada were felt in the proposed project area, but did not cause any significant local damage. [Kings County Regional Planning Agency (KCRPA), 1974].

The Seismic Safety Element of the Kings County General Plan (KCRPA, 1974) delineates six zones in the County that offer varying degrees of seismic hazard. The Planning Area is in Seismic Zone VI, which has the lowest potential for earthquake damage due to the distance to major fault zones. Secondary seismic hazards due to land slides, seismically induced settlement, and liquefaction are considered minimal in Kings County (KCRPA, 1974). Surface rupture would only occur near faults and, therefore, does not constitute a significant hazard in the Planning Area.

4.6.1.b(2) Liquefaction

Soil liquefaction is the loss of strength during a significant seismic event. Soil liquefaction occurs primarily in loose, fine to medium grained granular material in the presence of groundwater. Liquefaction occurs as soil particles are rearranging into a denser condition, which can result in localized areas of settlement, sand boils and flow failures. Saturated, cohesionless soil is temporarily transformed into a fluid mass. The primary factors that influence the potential for liquefaction include groundwater level, soil type and relative density, confining pressure, as intensity and duration of ground shaking.

The potential for liquefaction decreases as the groundwater depth increases, and liquefaction is considered unlikely where the ground water depth exceeds 30 feet. Initiation of liquefaction occurs primarily as a result of an earthquake. The distance to the closest active faults and the anticipated duration of ground shaking need to be noted.

Some areas associated with agricultural irrigation within the Planning Area may have groundwater less than 30 feet from the surface during certain times of the year. This condition generally exists in the southwestern part of the Planning Area. Several Studies around Hanford have concluded that liquefaction potential is low due to the medium dense nature of soils, the distance to active faults, and the relatively deep water table. Therefore, the potential for liquefaction to occur is considered to be low.

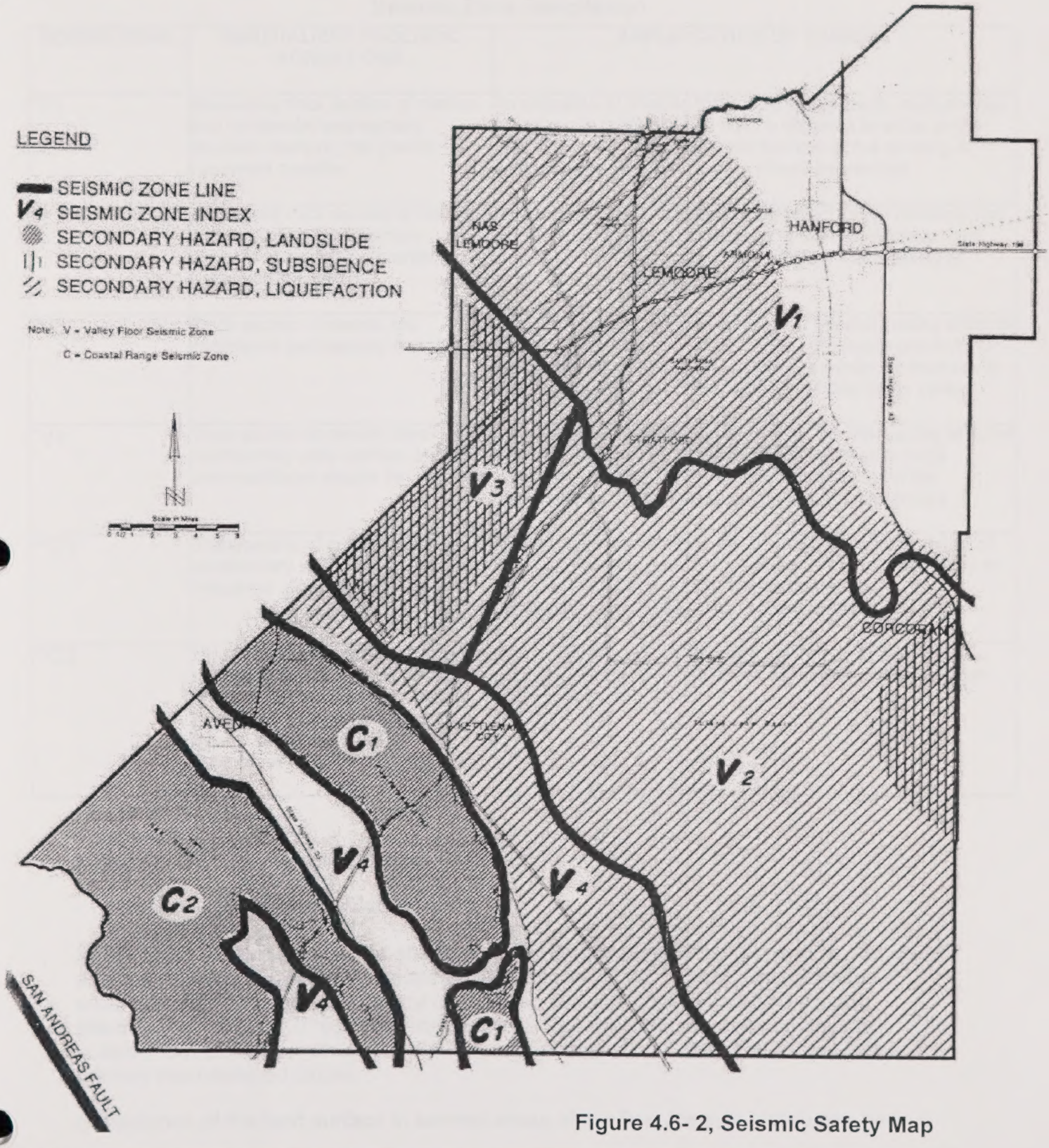


Figure 4.6- 2, Seismic Safety Map

Table 4.6 - 2

Seismic Zone Description

SEISMIC ZONE	GENERALIZED GEOLOGIC FORMATIONS	AMPLIFICATION OF SHAKING
*V1	Moderately thick section of marine and continental sedimentary deposits overlying the granitic basement complex	Amplification of shaking that would affect tow to medium- rise structures is relatively high but the distance to either of the fault systems that are expected sources of the shaking is sufficiently great that the effect should be minimal
*V2	Moderately thick section of marine and continental sedimentary deposits overlying the granitic basement complex	Amplification of shaking that would affect low to medium- rise structures is tow and the distance to the San Andreas fault zone is moderate The combined effect is that shaking is expected to be minimal
*V3	Thick section of marine and continental sedimentary deposits	Amplification of shaking is reduced by the dampening effect of the thick sedimentary section, but the moderate proximity of the San Andreas fault zone results in a moderate increase in expected shaking over that for the east side of the valley
*V4	Thick section of consolidated sedimentary units overlain by thick unconsolidated alluvial fan deposits	Amplification of shaking is reduced by the dampening effect of the thick sedimentary section, but its moderately close proximity to the San Andreas fault zone results in the expectation of moderately high shaking characteristics
**C1	Thick section of consolidated sedimentary units, with a high frequency of exposure	Amplification of shaking is low because of the firm nature of the surface in this area But, because of its close proximity to the San Andreas fault zone, the combination results in moderate to moderately high shaking characteristics
**C2	Moderately thick section of marine sedimentary rock unit with a high frequency of exposure throughout the area, with some metamorphics locally, which are of minor importance	Amplification is low, but the close proximity of the San Andreas fault zone should result in moderately high to high shaking characteristics

* Valley Floor Seismic Zone

** Coastal Range Seismic Zone

Source: 1974 Five County Seismic Safety Element

4.6.1.c Subsidence/Settlement

Subsidence or settlement is the shrinking of surface earth material caused by natural or artificial removal of underlying support. Subsidence occurs in poor, unconsolidated soils, primarily Alluvium, and poorly compacted fills. Seismically induced ground shaking, both local and regional, and heavy rainfall are naturally induced causes of subsidence. Extraction of earth materials, including groundwater, gas and oil is the primary man-induced cause.

Subsidence of the land surface in several areas of the San Joaquin Valley has been a

serious problem. The area west of Mendota on the west side of the valley has subsided up to 29 feet due to compaction of the aquifer system as a result of water level declines (Portland et al., 1975). Compaction is reported to be greatest when water levels decline substantially (several hundreds of feet) in the lower aquifer system. Subsidence in most affected areas has been slowed considerably with delivery of imported water to those areas and decreased dependency on ground water (Ireland et al., 1984).

Maps showing amounts of subsidence in the San Joaquin Valley suggest that approximately four feet of subsidence may have occurred in City of Hanford between 1920 and 1970 which coincided with a ground water level decline on the order of 100 feet or more (Poland et al.,1975; Mendenhall et al., 1916). There are no areas within the General Plan Area which contain a risk for subsidence or settlement.

4.6.1.d Soils

The General Plan Area is further defined as being located within the lower portion of the alluvial fan associated with the Kings River. The Kings River is approximately seven miles north of the Hanford Planning Area. The Planning Area is nearly level with a very gentle southwestward slope. Elevations within the Planning Area ranges from about 255 feet above Mean Sea Lever (MSL) in the northern to about 240 feet in the south. Prior to agricultural and urban development the alluvial fan deposits are dissected and cut by shallow, meandering sloughs and creeks. Most of the sloughs have been filled and leveled as a result of modernization. Several remnants of sloughs remain scattered in the Planning Area.

Underlying the Planning Area are recent alluvial fan deposits. These deposits were created by the accumulation of sediment transported by streams during the late Tertiary through the Quaternary periods. Beneath the alluvial deposits are moderately thick marine and continental sedimentary deposits that accumulated during the early and middle Tertiary ages. The basement complex is granitic.

These alluvial plains consist of soils associations. These associations have been divided into series, and these series have been further divided into soil types. Soil associations are useful for a general description of the soils in an area and for determining the value of an area for certain uses (such as watershed, wildlife, agriculture, development, or recreation). The General Plan Area has two associations:

Nord - This soil encompasses land along the Kings River that is generally north of State Highway 198 and west of the County line. This soil is very deep and well-drained, and is affected by a saline-alkaline condition. Nord has a Class II agricultural rating, and encompasses significant portions of Hanford.

Kimberline-Garces - This soil occupies land along State Highway 43 that is located south of State Highway 198 and east of State Highway 41. It encompasses the southeast quadrants of Hanford. This soil unit is very deep and well-drained, and has a agricultural rating that ranges from class II to class III.

4.6.2. Environmental Analysis

4.6.2.a Methodology

This analysis reviews the geologic conditions as the affect the proposed project area. The existing information available to the City was used to identify any potential hazards that may be present.

4.6.2.b Thresholds of Significance

A significant impact would exist if the project would:

1. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury', or death involving:

   a. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

   b. Strong seismic ground shaking?

   c. Seismic-related ground failure, including liquefaction and landslides?

2. Result in substantial soil erosion or the loss of topsoil?

3. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

4. Be located on expansive soil, as defined in Table 181-B of the Uniform Building Code (1994), creating substantial risks to life or property'?

4.6.2.c Impacts

Development pursuant to the General Plan would expose additional people to effects of ground shaking from an earthquake as it would result in a population increase in the Planning Area. Property damage, personal injury, and the loss of life may result from such an event. The projected population growth in the Planning Area increases the "population at risk" during a geologic event. The overall level of risk associated with earthquake hazards is adverse, but similar to those hazards present throughout the rest of the seismically active Kings County.

The Hazards Management Element of the General Plan establishes the City's approach to ensuring a safe living environment for its residents. The goal of the Hazards Management Element calls for minimizing the community's exposure to harmful impacts

caused by natural and man made hazards. Policy HZ 1.2 addresses the protection of the community from seismic hazards. Programs HZ 1.2 A through 1.2 C and related actions establish requirements for site specific geologic and soil studies, use of most current professional standards in building design and standards governing the location of critical facilities.

Remediation of seismically unsound buildings in the historic downtown is also addressed in the General Plan Land Use Element. Pursuant to state Law, hazardous buildings must be inventoried, and cities/counties must develop a remediation program for these structures. The General Plan recognizes the responsibility for monitoring of these buildings and the need to provide technical assistance to property owners to remediate the structures within the context of the Historic District provisions of the Zoning Ordinance.

4.6.2.d Mitigation Measures

No mitigation measures are required beyond the Policies and Programs contained in the General Plan. The General Plan Open Space/Conservation, and Recreation Element, and the Public Facilities Element contains several Policies and Programs which help mitigate impacts associated with implementation of the General Plan. Specifically, Objective HZ 1, Policy HZ 1.1, Programs HZ 1.1 – A & B; Policy HZ 1.2, Programs HZ 1.2 – A through C; Policy HZ 3.2, Programs HZ 3.2 – A through D.

Level of Significance After Mitigation

Less than Significant.

Mitigation Implementation and Monitoring Responsibility

Implementation: The City of Hanford Community Development Department through the Site Plan Review Committee shall be responsible for the implementation of the mitigation measures through the Building Permit, Site Plan Review, and/or subdivision review process.

Monitoring: The various implementing departments of the City of Hanford are responsible for administering the City's Site Plan Review and Subdivision Ordinance processes. An application for a Certificate of Occupancy is required prior to completing a project. The conditions of approval are checked prior to issuing a Certificate of Occupancy.

4.7. HAZARDS AND HAZARDOUS MATERIALS

4.7.1. Environmental Setting

The City of Hanford has historically been surrounded by agricultural land and functioned as the county seat of Kings County. As such, it has been a major agricultural service center for the distribution of supplies and equipment. As small communities grow over time, they begin to encroach on areas which were "out of town" in the past. Often in these out of town locations disposal of, now classified, hazardous wastes may have occurred. The practice of disposing of these wastes in the ground was an accepted practice and the materials were not considered a significant environmental issue. As a result, sensitive receptors, such as residences and schools, may be exposed to potential public health and safety hazards. The General Plan provides policies and programs to minimize the public's exposure to these potentially hazardous circumstances. The General Plan also discusses other public safety hazards such as flooding and dam inundation.

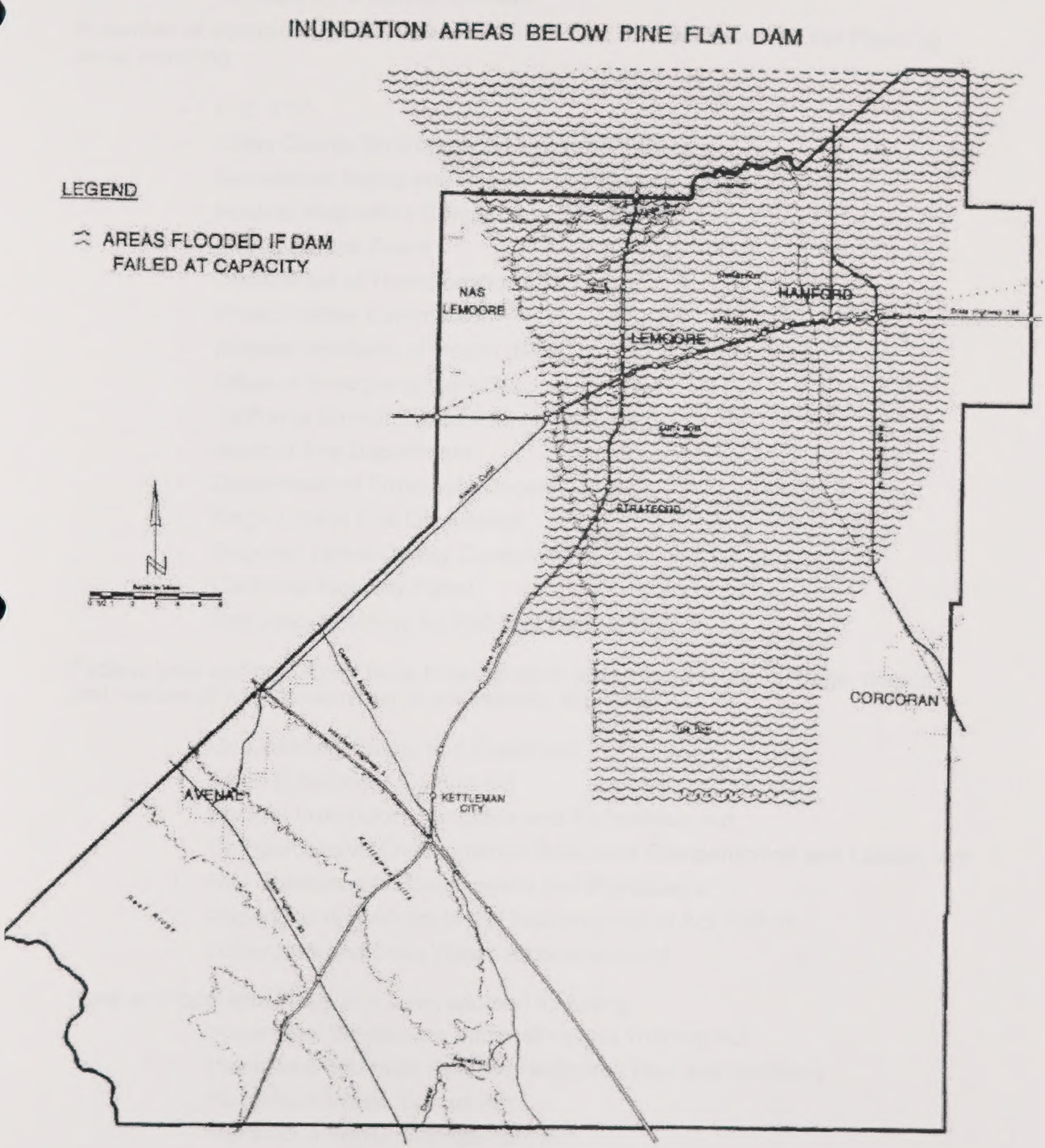
The Terminus, Success, and Pine Flat Dams (located in the Sierra Nevada just east of the Valley floor on the Kaweah, Tule, and Kings Rivers, respectively), plus improvements made to other flood control facilities in the Kings County area, have significantly reduced local natural flood hazards. According to the U.S. Army Corps of Engineers inundation maps, the failure of Success Dam would not affect inhabited portions of Kings County. Pine Flat and Terminus are the only dams in the region which, if breached, might cause flooding of significance to local inhabited areas. If Pine Flat Dam failed while at full capacity, its floodwaters would arrive in Kings County within approximately five hours. Failure of the Pine Flat Dam would effect Hanford. The inundation map is shown as Figure 4.7 - 1, Pine Flat Dam Inundation Map.

If Terminus Dam failed while at full capacity, its floodwaters would arrive in Kings County within approximately 12 hours, but is not shown to effect Hanford. The likelihood of any of these dams failing while at full capacity is considered remote.

The term "hazardous material" refers to both hazardous substances and hazardous waste. A material is defined as hazardous if it appears on a list of hazardous materials prepared by a federal, state or local regulatory agency or if it has characteristics defined as hazardous by such an agency.

The United States Environmental Protection Agency (EPA) classifies a material as a hazardous material if it has one or more of the following properties:

- Ignitability - oxidizers, compressed gasses and extremely flammable liquids and solids;
- Corrosivity - strong acids and bases;
- Reactivity - explosives or generate toxic fumes when exposed to air or water; and,



Source: U.S. Army Corps of Engineers

Figure 4.7 - 1 Pine Flat Dam Inundation Map

- Toxicity - materials listed by the EPA as capable of inducing systemic damage in humans or animals.

A number of agencies regulate hazardous materials and wastes within the Planning Area, including:

- U.S. EPA
- Kings County Environmental Health Department
- Occupation Safety and Health Administration (OSHA)
- Nuclear Regulatory Commission (NRC)
- Air Resources Board
- Department of Transportation (DOT)
- Public Utilities Commission
- National Institutes of Health (NIH)
- Office of Emergency Services
- California Environmental Protection Agency
- Hanford Fire Department
- Department of Toxic Substances Control
- Kings County Fire Department
- Regional Water Quality Control Board
- California Highway Patrol
- San Joaquin Valley Air Pollution Control District

Federal laws and guidelines have been adopted governing the use, storage, disposal and release of hazardous material and wastes, including:

- Occupational Safety and Health Act
- Toxic Substances Control Act
- Federal Insecticide, Fungicide and Rodenticide Act
- Comprehensive Environmental Response Compensation and Liability Act
- NIH Guidelines for Carcinogens and Biohazards
- Superfund Amendments and Reauthorization Act Title III
- Hazardous and Solid Waste Amendment Act

State and local laws have also been adopted including:

- Hazardous Substances Information and Training Act
- Hazardous Materials Release Response Plan and Inventory
- Hazardous Waste Control Act
- Hazardous Waste Management Act
- Toxic Hot Spots Act

Agencies responsible for the administration of these laws and regulations have adopted standards and enforcement provisions. Applicable federal regulations are contained primarily in Titles 29, 40, and 49 of the Code of Federal Regulations (29 CFR; 40 CFR; 49 CFR). State regulations applicable to hazardous materials are contained primarily in Title 26 of the California Administrative Code (26 CAC).

Kings County has adopted the Kings County Hazardous Waste Management Plan (KCHWMP) and the County of Kings Hazardous Material Incident Response Plan that identifies specific agencies and responsibilities during accidental transportation, pipeline, and industrial releases of hazardous materials emergencies.

4.7.1.a Agriculture

Outside of the urban area, agriculture has been the dominant use in the Planning Area. A variety of agricultural activities occur within the Planning Area including production of cotton, tree crops, grapes, alfalfa, kiwis, dairies, and rotating field crops. Except for organic farms, typical agricultural practices rely heavily on chemical fertilizers and pesticides in the production of crops. The type of chemicals used and application frequency varies by kind of crop, soil conditions, and climatic conditions. The effects of chemical additives on crops are sometimes overshadowed by the potential impacts on the environment of residual or inappropriately applied chemicals. Among the problems that can be caused by chemical use are health risks for agricultural workers, contamination of groundwater and surface waters, and in significant cases death and deformation of wildlife, especially birds and fish. Cattle yards are another source of contamination, and often pollute the shallow groundwater with high levels of nitrates and total dissolved solids. In the San Joaquin Valley groundwater in many areas is contaminated with Dibromo Chloropropane (DBCP), a pesticide developed to rid crops of nematodes. The pesticide was banned in 1977, but has been detected in a number of wells, particularly in shallow ground water.

Aerial Spraying of pesticides and herbicides is a common practice in the San Joaquin Valley. The Hanford Airport prohibits aerial spraying. The City of Hanford has adopted regulations regarding the operation of aerial spraying companies located at the airport.

4.7.1.b Industrial Areas in Proximity to Sensitive Receptors

The existing City is comprised of about 3,559 acres of residential land uses, and 870 acres of schools, as well as hospitals, daycare centers, and convalescent homes. Theses are considered sensitive receptors. The potential for safety hazards generally occurs with proximity to industrial uses (active and inactive). There is approximately 930 acres of industrial uses within the area (this acreage includes public facilities such as the City's wastewater treatment plant).

In the early development of the City an industrial area emerged around the San Joaquin Valley Railroad tracks (north of Highway 198) near the center of the City, and also along the Burlington Northern and Santa Fe (AT&SF) Railway tracks south of State Highway 198. Most of the later industrial activity occurred several miles south of the urban core of the City, in the Kings Industrial Park where there is sufficient buffering to potentially sensitive uses. The older industrial area near the center of the City's core is in close

proximity of residential areas. Most of the potential conflicts that may arise are related to air emissions, although soil contamination is a concern for several locations.

Federal and state laws require all businesses which generate, store, handle or dispose of hazardous materials in designated planning threshold quantities must submit to the Kings County Environmental Health Department, the following:

- An inventory of all chemicals manufactured, imported, processed or handled;
- The maximum quantity of the chemical on-site at any one time;
- The total quantity of the chemical released during the year, including both accidental and routine emissions;
- Off-site locations to which the chemicals are shipped;
- Treatment methods for the chemical;
- A response and evacuation plan, should an accident occur; and,
- An employee training plan.

These regulations are for the purpose of providing information to emergency response teams to assist them in safe and efficient handling, and to provide the public in general with information regarding chemicals, which are in the community.

Health risk assessments may be required when schools and facilities handling hazardous materials are located within 1/4 mile of each other (Section 21151 of the California Public Resources Code).

4.7.1.c Transportation Corridors

There are two major transportation corridors within the Planning Area, State Highways 198 and 43. Trucks and other vehicles transport a wide variety of hazardous materials through the Planning Area using these routes. In addition, the BN &SF and San Joaquin Valley Railroad, also transport hazardous materials through the City on a regular basis. There are no pipelines containing hazardous materials in the Planning Area.

An accident on any of the major transportation facilities in the Planning Area could result in environmental contamination and human health effects. Vehicle crossings of railroad facilities represents the most significant potential point where accidents may occur. Accidents along Highways 198 and 43 may occur at any time, but more probable on foggy days. As with railroads, the most significant locations for potential accidents are at road intersections.

4.7.1.d Solid Waste Facilities

There are no active solid waste disposal facilities within the Planning Area. The Kings County Waste Management Authority (KCWMA) was formed in September 1989 by agreement between the cities of Hanford, Lemoore, Corcoran and the County of Kings in order to provide a regional approach to all waste management activities in Kings

County. The name has since been changed to Kings Waste Recycling Authority (KWRA).

With three of the four incorporated cities in the County and the County Government as members, the Authority represents the entire County with the exception of the City of Avenal and the Lemoore Naval Air Station. KWRA operates the material recovery facility/transfer station as an enterprise function, with all revenue coming from solid waste disposal fees and sale of recovered recyclable materials and compost. Responsibilities of the KWRA include the siting, permitting, financing, construction and operation of landfills, a Materials recovery facility/transfer station. Additional responsibilities include all activities and waste diversion goals required by the State and the closure, post-closure monitoring and liabilities of all identified former landfills in Kings County.

The existing KWRA landfill southeast of the City of Hanford was closed in 1998. The KWRA does not operate an active landfill. Waste is hauled by transfer trucks form the Material Recover Facility (MRF) to the State permitted Chemical Waste Management Landfill site in the Kettlemen Hills approximately 45 miles west of the MRF. A combined Materials Recovery Facility (MRF) and Transfer Station (TS) has been constructed near the old landfill southeast of the City. The Materials Recovery and Transfer station facility includes a small but complete Household Hazardous Waste collection station.

The City of Hanford and Kings County have cooperatively developed the Integrated Waste Management Plan (1995). This Plan contains the mandatory elements of a Source Reduction and Recycling Element (SRRE) and a Household Hazardous Waste Element (HHWE). In addition, this document contains A Siting Element and the Non-Disposal Facility Element for the City of Hanford. This Plan has been accepted by the California Integrated Waste Management Board.

4.7.1.e Existing Contaminated Sites

4.7.1.a(1) Agricultural Areas

Due to the diverse nature of agricultural production within the Planning Area it is reasonable to assume that many different types of pesticides are, and have been applied. Because the types of pesticides used and the methods of application vary by crop and agricultural management practices, the residual levels or concentrations of pesticides that are present in the soil cannot be determined until a site survey and soils tests are conducted. Such testing may be appropriate for specific projects, such as residential, schools, and other uses which may have direct contact with the soil. Substances of particular concern include herbicides, pesticides and other complex organics, petroleum products, and other substances that contain trace concentrations of metals.

Aerial spraying of crops has been undertaken for some years. Management practices have been improved in recent history to address the identified environmental concerns. Nevertheless, past practices (acceptable at the time) may have contaminated land near aerial spraying base operations.

4.7.1.a(2) Leaking Underground Storage Tanks

The majority of underground storage tanks contain gasoline, and other petroleum products such as diesel and waste oil. Potentially, a variety of other hazardous materials and wastes, such as solvents, can also be stored in underground tanks. The state has determined that storage of hazardous substances in general, and petroleum products in particular, were potential sources of contamination of the soil and underlying aquifers, and may pose other dangers to public health and the environment. Implementing regulations, based on federal and state concerns, required remedial action to replace underground tanks and prevent future contamination from underground storage tanks. These regulations also required that all soil and ground water contamination be cleaned up.

4.7.1.a(3) Other Potential Contaminated Sites

Although not officially identified on state or federal lists, other potential contaminated sites may include junkyards, auto dismantlers, and railroad right-of-ways. Where development projects are proposed on or near sites that may be potentially contaminated, special attention should be paid to minimize health impacts to sensitive receptors.

4.7.1.a(4) Solid Waste Facilities

An abandoned solid waste facility is located within the Planning Area. This facility was used as a disposal facility (open burn) for Hanford over the years and was closed prior to the State Integrated Waste Management Board regulations governing closures. No analysis has been preformed on the site to determine if hazardous waste is present and remedial activities are necessary. Future development within this area, which proposes sensitive uses will be responsible for the analysis and any remedial action.

4.7.2. Impact Analysis

4.7.2.a Methodology

Analysis included comparing current available information with the issues in the 1994 General Plan and contrasting the Land Use Plan to determine increase in potential hazards or hazardous materials in the Planning Area. Local agencies were contacted in the process of collecting information contained in this Section of the EIR. As part of the analysis, the current Land Use Map and aerial photographs were used along with windshield surveys of area was conducted.

4.7.2.b Significance Criteria

A significant impact would occur if the project would:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident condition involving the release of hazardous materials into the environment?

c) Emit hazardous emission or handle hazardous or acutely hazardous material, substance, or waste within one-quarter mile of an existing or proposed school?

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

4.7.2.c Impacts

Transportation of Hazardous Wastes

Transportation is among the greatest risks associated with hazardous waste management programs. Given the capacity of the Kettleman Hills facility and the many waste generators shipping hazardous materials to the facility, there is a significant potential risk to the Hanford community associated with transportation related hazardous waste incidents.

The Kings CHWMP seeks to minimize the risk of transportation related incident through designating routes for hazardous waste transport. At present, the CHWMP only indicates that transport should occur on the most major road possible. Roadways are defined in a three-tier classification of minor roads, arterial or collector roads and state and interstate routes. The CHWMP suggests that transport should be maximized on the highest tier roads, or highways and freeways, and minimized on the lowest tier, or minor roads, to the extent feasible. Additional considerations of overall safety and economy of routes will be considered in designating specific transport routes. In cooperation with the Cities and California Highway Patrol Kings County has designated specific routes for transport of hazardous wastes. Transportation of hazardous materials through the City is a less than significant impact.

Conversion of Agricultural Land to Residential Uses

The proposed General Plan designates a variety of land uses in areas where past and present agricultural practices may have resulted in soil contamination, especially pesticide storage. Pesticide spraying near urban land uses may result in health risks. The level of health risks is very limited and the California Environmental Protection Agency is currently studying this issue. As development projects are considered by the City, this area of concern should be included in future environmental assessments. The General Plan contains policies that would require such analysis and reduce the potential impact to less than significant.

Buffers between agricultural operations and sensitive uses are established for some chemical applications. The California Environmental Protection Agency, Department of Pesticide Regulation is responsible for research and setting standards. The widest buffer for any chemical is 2/3 mile for methyl bromide. Although a buffer may not be required, agricultural spraying adjacent to residential uses is often perceived as a health threat by the residential inhabitants. This is an obvious land use conflict that is often addressed by the imposition of buffers which effects continued agriculture production on those adjacent lands. The City of Hanford, working with Kings County, can address these concerns by adoption of a Right to Farm Ordinance and requiring the developer to disclose to new residents that they may be effected by adjacent agricultural operations. This land use conflict should be evaluated in environmental assessments of development projects and where required use restrictions project phasing or buffers) established.

4.7.2.a(1) Facilities Emitting Toxic Air Contaminants in Proximity to Sensitive Receptors

The General Plan continues to focus major industrial development in the Kings Industrial Park, which is buffered from sensitive land uses. However, some light industrial areas are designate near the urban core, which are currently vacant. In addition, the Service Commercial land use designation allows heavier commercial uses such as vehicle repair shops, fabrication businesses, service stations, and other uses which may utilize hazardous materials. Siting such uses in the vicinity of sensitive receptors can result in significant health impacts. The risks of siting new residential, school or other sensitive receptors near existing facilities that may use hazardous materials should be evaluated in the environmental assessment for the residential project. Likewise, siting of new facilities that may use hazardous materials should evaluate the risks to the existing sensitive receptors. The responsibility for addressing and mitigating the health risks should fall on the project proponent. Implementation of General Plan policies would result in a less than significant impact.

Groundwater and Soils Contamination

The City of Hanford is dependent on groundwater for their water supply. It is likely, that all future domestic public wells will use the deep aquifer for supply where water quality is superior. Existing contamination to groundwater and soils that are discovered will be addressed by the remedial actions of state and federal regulations. New storage facilities and the handling of hazardous materials are regulated to mitigate further problems from underground storage tanks and disposal of any wastes. However, as

part of development proposals site specific analysis should be undertaken to identify any contamination problems and sensitive receptors that may be effected.

Hanford Airport and Airport Facilities

There are no private airports within the Planning Area. The land use restrictions for the Hanford Airport Land Use Compatibility Plan are listed in the General Plan Land Use Element. Adherence to the General Plan policies regarding the Hanford Airport will create a less than significant impact.

4.7.2.d Mitigation Measures

Implementation of the proposed General Plan could result in a significant increase in population at risk, as well as, increase in the number of facilities, which may contain hazardous materials. General Plan Policies HZ 2.1, and Programs HZ 2.1(A) through (H);Policies LU 8.1, LU 8.2, and Programs LU 8.1(A) through (D), and LU 8.2(A) as well as the following mitigation measures, impacts are reduced to a less than significant level. Implementation of some Mitigation Measures requires cooperation between the City of Hanford and Kings County.

Level of Significance after Mitigation

Less than Significant

Mitigation Implementation and Monitoring Responsibility

Implementation: The City of Hanford Community Development Department through the Annexation, Subdivision Map, and project review processes shall be responsible for recommending findings of consistency with the General Plan. The Hanford Planning Commission and City Council are responsible for adopting such findings of consistency prior to project approval.

Monitoring: The various implementing departments of the City of Hanford are responsible for administering the City's Site Plan Review and Subdivision Ordinance processes. An application for a Certificate of Occupancy is required prior to completing a project. The conditions of approval are checked prior to issuing a Certificate of Occupancy.

4.8. HYDROLOGY

4.8.1. Environmental Setting

4.8.1.a Regional Hydrologic Setting

The Planning Area is situated in the north central portion of the Tulare Lake Hydrologic Study Area (TLHSA) as defined by the California Department of Water Resources (DWR, 1983). The TLHSA encompasses approximately 524,800 acres in the southern portion of the San Joaquin Valley, south of the Kings River Watershed, and the adjacent mountain slopes, including the west slope of the Sierra Nevada. The valley portion of the TLHSA, including the Hanford General Plan Planning Area, has a Mediterranean-type climate characterized by hot, dry summers and temperate winters.

The TLHSA is characterized by internal drainage. Surface runoff in the area is towards surface depressions, the largest of which is Tulare Lake Playa located 18 miles southwest of the Planning Area. The majority of surface water runoff originates as precipitation over the Sierra Nevada. Runoff from the major westerly flowing rivers draining the Sierra is impounded in reservoirs along the foothills and discharged at controlled rates. This provides hydroelectric power as well as surface water for irrigation and infiltration during dry summer months. Downstream from the reservoirs, rivers bifurcate into many subordinate creeks, canals, and ditches that flow west, southwest, or south across the valley floor. Almost all of the flow is used for irrigation purposes. Excess uncontrolled floodwaters discharge onto Tulare Lake Playa.

The Planning Area is located in the southern portion of the San Joaquin Valley Groundwater basin. The San Joaquin Valley Ground-Water Basin is the largest ground-water basin in California. This basin covers approximately 13,500 square miles and has a storage capacity of 570 million acre-feet with a useable capacity of at least 80 million acre-feet (DWR, 1975; 1980). Groundwater in much of the southern portion of the San Joaquin Valley Ground-Water Basin occurs under unconfined, semi-confined or confined conditions. Confined conditions generally occur beneath a laterally extensive clay strata known as the E-clay (Corcoran clay) which occurs at varying depths in the General Plan Area. Unconfined and/or semi-confined conditions generally occur above the E-clay, although confined conditions may also be present locally as a result of other clay layers located above the E-clay.

Groundwater conditions in the southern San Joaquin Valley Groundwater Basin have changed significantly since an initial site reconnaissance study by Mendenhall et al. in 1916. At that time, water levels were less than 20 feet below ground surface in many areas, flowing (artesian) wells were common and annual ground-water pumpage in the entire San Joaquin Valley was estimated to be 250,000 acre-feet. Since this initial study, increased use of groundwater resources, primarily to meet agricultural irrigation demands, has resulted in a general trend toward lowered groundwater recharge as early as the 1930's (DWR, 1983).

According to a report prepared by DWR, the TLHSA has a storage capacity of 1.5 million acre feet and a perennial yield of 443,000 acre feet. Total annual extraction is estimated at 672,000 acre feet with urban extraction at 24,000 acre feet (Hanford is

currently about 10,300 acre feet). Agricultural extraction accounts for the balance. DWR estimates the annual overdraft is 229,000 acre feet.

4.8.1.b Local Hydrologic Setting

4.8,1.a(1) Precipitation

According to the average rainfall over a 50 year record period measured at a station in the City of Hanford was 7.9 inches. Kings County Agricultural 1992 Crop Report. The maximum annual rainfall recorded in the last 15 years was 16.13 inches in 1977/78, and the minimum annual rainfall of 5.06 inches occurred in 1984. The longest period of below normal precipitation was a five year period between 1947 and 1951. About 85 percent of the annual precipitation occurs in the six months of November through April. Evaporation data relevant to the Planning Area suggests that mean annual evaporation for the area is about 64 inches (CDWR, 1979).

4.8.1.c Flood Control

The General Plan Area generally lies outside any major flood prone areas according to the United States Federal Emergency Management Agency (FEMA), Flood Insurance Rate Map (Community Panel Number 0600880001-0010, March 1987). There are small localized areas within the Planning Area where it shown to be within the 100 year flood plain (See Hazards Management Element, Figure HZ-3).

Storm water drainage is accomplished in the General Plan Area through a system of storm water collection and water recharge basins and metered discharge into the Central Branch of People's Ditch Company irrigation canal. The maximum discharge into the canal is limited by agreement to a total simultaneous flow of 50 cubic feet per second.

Several drainage studies within the Planning Area have recommended acquiring and improving natural sloughs as part of the overall drainage system. The sloughs provide capacity for storm water retention, but also are an excellent location for ground water recharge. These studies have recommended improving the capacity of the Peoples Ditch facility and development of downstream basins as a means of providing an out fall for storm water and recharge. In non-storm seasons, the basin could also be used to recharge excess surface water carried in the canal system.

The east branch of the Peoples Ditch system is no longer in service as an irrigation facility, and serves a portion of eastern Hanford as a drainage conveyance. The City is endeavoring to maintain and develop that facility, plus improve the outfall to accommodate additional storm water run off.

New development is required to provide on-site disposal of storm water or tie into an existing system if capacity is available.

4.8.1.d Surface Water

The Planning Area is nearly flat without any natural surface water channels. Remnants of the Sand Slough and Mussel Slough are present in scattered locations, typically in

the southwestern portion of the Planning Area. Several surface irrigation canals traverse the Planning Area. The major facility is the Peoples Ditch facility, which generally dissects the western portion of the Planning Area north to south. The Lakeside Ditch is located in the southern portion of the Planning Area and generally runs east and west through the industrial area of the community. Last Chance Ditch is located on the far western edge of the Planning Area, and only a small portion is within the community. The irrigation facilities are for the most part unlined. The Kings River is located about three miles north of the Planning Area.

Historically, much of the southern San Joaquin Valley drained to the Tulare Lake Basin located in central Kings County. Although the lakebed has been largely reclaimed for agricultural purposes, it still receives surface water flows from the South Fork of the Kings Rivers and other local channels, particularly under high flow conditions.

The primary local source of surface water in Kings County is the Kings River, which is regulated by Pine Flat Dam east of Fresno. This river provides irrigation water to more than one million acres of agricultural lands in Fresno, Kings and Tulare Counties. The distribution of Kings River water to irrigation districts and other water rights holders is administered by the Kings River Water Association.

Other local sources of surface water in Kings County include the Kaweah River, Tule River, and, in extremely wet years, the Kern River. However, the amount of water that is delivered in these rivers to Kings County is minimal relative to Kings River deliveries. Very little, if any, water from the Kaweah and Tule Rivers generally is delivered to water rights holders in Kings County in below-average water years.

Sources of imported surface water include the California Aqueduct, which carries water from State Water Project (SWP) and the Federal Central Valley Project (CVP), and the CVP Friant-Kern Canal on the east side of the Valley. Friant-Kern Canal contractors in Kings County receive their water from the Kaweah River through exchanges with Friant-Kern Canal contractors on the Kaweah River.

The Kings County Water District (CWD) was formed in 1954 under the County Water District Act to provide a legal entity for water management in the Northeast portion of Kings County.

The District encompasses a land area of approximately 143,000 acres. The District includes portions of the service areas of three major mutual ditch companies; Peoples Ditch Company and Last Chance Water Ditch Company which possess water rights on the Kings River and the Lakeside Ditch Company which holds water rights on the Kaweah River. In addition to the service areas of these ditch companies, the District boundary completely encompasses the area (31,845 acres) of the lakeside Irrigation Water District, a California Water District formed to administer the water rights and distribution system of the Lakeside Irrigation Water District. The District also includes an improvement District, which was formed for the maintenance and operation of the Riverside Ditch, a conveyance system used to distribute a portion of the Peoples Ditch Company water.

These three major ditch companies were formed as mutual companies in the early1870's, when this portion of the San Joaquin Valley was the focus of settlement.

These private appropriations and diversions were among the earliest major irrigation projects in the San Joaquin Valley.

Conjunctive use of surface water and groundwater has been practiced within the District since its formation in 1954. Through the purchase of slough channels and other appropriate sites for use as recharge basins, and by the purchase and importation of available surplus water and flood released water, the Kings County Water District has reduced the decline of groundwater levels within the District.

4.8.1.e Groundwater

Groundwater levels near Hanford in the early part of the century were generally within 20 feet of ground surface and surface artesian flow in many wells was common. Such shallow groundwater levels preceded large scale development of groundwater resources in the area, which led to an overall long-term decline in groundwater levels. This decline has not been uniform and significant water level increases have accompanied periods of decreased dependency on ground water and increased recharge, typically during wet periods (Javis et al., 1959).

The aquifer system in the Planning Area generally consists of an upper and lower aquifer, which are separated by a relatively thick clay layer of regional extent referred to as the E-clay or Corcoran Clay. Because of its low permeability, the E-clay inhibits the vertical flow of ground water. The E-clay is inferred to be present at a depth of about 450 feet below ground surface and is on the order of 50 to 100 feet thick underlying most of the Planning Area. (Croft and Gordon, 1968). The E-clay tapers out and becomes less distinct toward the northern edge of the Planning Area. This clay layer is inferred to extend out several miles north of Hanford, although several maps of the area depict the limit at different. Several other clay layers of regional extent may be present beneath the Planning Area; however, these are not inferred to extend north of Hanford.

The upper aquifer generally consists of inter-bedded sands and clays, which contain water under unconfined or semi-confined conditions. The lower aquifer also consists of inter-bedded sands and clays, but contains water under confined conditions. The units are not thought to be in hydrologic contact except through well casings perforated in both aquifers and through well gravel packs. McGlasson and Associates (1971) report that static pressure in the lower aquifer is approximately equal to the water surface elevation in the upper aquifer at Hanford. Recent water level data for wells in the City of Hanford also suggest approximately equal heads for the two aquifers (City of Hanford, Engineering Department, 1987). The existence of this equal head is primarily due to the proximity of the northern edge of the E-clay to the City of Hanford reducing the build up of substantial head in the lower aquifer.

Infiltration from steam flows, artificial recharge, and return flow from applications of irrigation water replenish the upper, unconfined aquifer system. The deeper, confined system is replenished primarily by the lateral flow of groundwater from unconfined aquifers at the edges of the E-clay. Much of the replenishment water comes from the aquifer system under the alluvial fan of the Kaweah River on the east side of the Valley that is "up-gradient' of the Hanford area. Subsurface flow in the aquifer system under the Kings River in northeast Kings County also replenishes the confined aquifer. Groundwater that is confined by the E-Clay generally is highly mineralized with high

concentrations of dissolved solids (Kings County General Plan).

The Kings County Water District, located in northeast Kings County, has collected bi-annual depth-to-groundwater measurements in wells that pump from the shallow aquifer system within the District since the early 1960's. The District's data indicates that the water depths generally have fluctuated in response to surface water conditions. During drought periods, the water levels have dropped which is indicative of agricultural groundwater pumping in response to surface water limitations. While during "wet" periods, the ground water levels have risen when the supply of surface water for irrigation is more abundant.

The City of Hanford has initiated a program to drill wells below the E-Clay layer to avoid taking water from unconfined shallow layers in order to achieve better water quality. This program will have a positive influence on the shallow unconfined aquifer level where many agricultural irrigation wells are located. The deeper wells typically are expected to provide a more reliable ground water supply than shallower wells and have reasonably stable water levels during extending drought periods. Although increasing in demand, the City's water share is only three percent 3 percent of total overall water demand for the Water District.

The average Fall water depths in the District have ranged from a minimum of 36 feet to maximum of 82 feet. The maximum average water depth of 82 feet occurred in 1992 at the end of the recent extended drought, during which the average water level dropped 35 feet. The prior maximum average depth of 71.5 occurred in 1977, which was the second year of a severe two-year drought. The minimum average Fall depth of 36 feet occurred in 1984 after a series of indicates that the water levels typically drop five to ten feet during the summer and rise during the winter.

4.8.1.f Recent Amendment to State Law Effecting the City of Hanford General Plan

State Law has recently changes (January 1, 2002) SB 221 prohibits a planning agency from approving a project that includes a subdivision of more than 500 units unless tile development agreement provides that any tentative map prepared for the subdivision will comply with the requirements of this bill, including;

1. Specifies that for purposes of the notice of intention to subdivide, in the case of a subdivision subject to existing law, that the statement of the provisions made for water shall be satisfied by submitting a copy of the written verification of the available water supply required by this bill.

2. Specifies that a development agreement that includes a subdivision subject to existing law shall not be approved unless it provides that any tentative map prepared for the subdivision will comply with the criteria specified in this bill

3. Specifies that not later than five days after a planning agency has determined that a tentative map application for a proposed subdivision is complete, that the agency shall send a copy of the application to any water supplier that is, or may become, a public water system that may supply water for the subdivision.

4. Defines subdivision, sufficient water supply and public water system.

5. Requires the planning agency to include as a condition in any tentative maps that includes a subdivision a requirement that a sufficient water supply shall be available.

6. Specifies that proof of availability of a sufficient water supply shall be based on tile written verification from the applicable water supplier, and that such verification is to be provided within 90 days of a request.

7. Specifies that a local agency or any other interested party may seek a writ of mandamus if the water supplier fails to provide the written verification required.

8. Specifies that if the written verification indicates there is not a sufficient water supply that will meet the reasonable needs of the proposed subdivision, that the local agency may make a finding that additional water supplies not accounted for in the written verification are or will be available prior to completion of tile project. Requires the findings to be on the record and supported by substantial evidence.

9. Requires, when written verification relies on obtaining projected water supplies, that the verification be based on certain specified information to the extent each is applicable.

10. Provides that if there is no water supplier, that the local agency shall make a written finding of sufficient water supply based on specified evidentiary requirements, and further provides that the local agency may work in conjunction with the project applicant and tile public water system to secure sufficient water supplies.

11 Provides that the written verification shall include a description, to the extent data is reasonably available, of the reasonably foreseeable impacts of the proposed subdivision on the availability of water resources for agricultural and industrial uses within the public water systems service area that are not currently receiving water from the public water system but are utilizing the same sources of water.

12. Specifies that where a water supply for a proposed subdivision includes groundwater, that the public water system shall evaluate, based on substantial evidence, the extent to which it or the landowner has the right to extract the additional groundwater needed to supply the proposed subdivision. States that nothing in the subdivision is intended to modify state law with regard to groundwater rights.

13. Specifies that this section does not apply to any residential project proposed for a site that is within an urbanized area and has been previously developed, or where the immediate contiguous properties surrounding the site are, or previously have been developed for urban uses, or housing projects that are exclusively for very low and low-income households.

14. Recognizes that current law requires water providers to grant priority for the provision of available and future water resources or services to proposed housing developments that help meet a local agencies share of the regional housing needs for

lower income households.

15. Provides that any action challenging the sufficiency of the public water systems written verification shall commence within 90 days after the date of such a decision.

In another piece of legislation that became effiective January 1, 2002, SB 610 in certain circumstances, expands the requirement for public water systems to prepare water supply assessments for large-scale projects, requires that additional information be included in assessments, and makes related changes. This bill:

1. Requires that if groundwater is identified as an existing or planned source of water available to the supplier that certain additional specified information be included in the urban water management plan (UWMP).

2. Expands the existing water supply assessment requirement to include those projects which a city or county determines is subject to the California Environmental Quality Act.

3. Requires UWMPs to include an identification of any existing water supply entitlements, water rights, or water service contracts held relevant to the water supply for the proposed project, and a description of water deliveries received in prior years. Specifies that the identification of existing water supply entitlements, water rights, or water service contracts held shall be demonstrated by providing certain specified information.

4. Specifies that an urban water supplier that does not submit its UWMP is ineligible to receive funding from specified bond funds. Requires the Department of Water Resources (DWR) to take into consideration whether the urban water supplier has submitted an updated UWMP when determining whether the supplier is eligible for funds from programs administered by DWR.

5. Provides that if a public water system fails to request an extension of time that a city or county may seek a writ of mandamus to compel the submission of the water supply assessment.

6. Requires, if the city or county is unable to identify a water system that may supply the project, that the city or county prepare the water assessment after consulting with the local agency formation commission and any adjacent water system. Requires the assessment to contain certain specified information.

7. Requires, if the projected water demand of the project was not described in the most recently adopted UWMP, or the water system has no UWMP, or a city or county is required to comply, that the water supply assessment for the project include a discussion with regard to the water systems total projected water supplies available during various water year types will meet the projected water demand of the proposed project in addition to existing and planned future uses.

8. Specifies that if a project has been the subject of a water supply assessment in

compliance with tile requirements of the bill that no additional analysis shall be re uired unless certain specified changes occur.

9. Revises the definition of project to include a general plan, element, or amendment provides for one or more of the projects, as defined, and a project that would demand an amount of water equivalent to, or greater than, that required by a 500 unit project.

I0. Requires a water system with fewer than 5,000 connections to prepare a water supply assessment if any proposed development would account for an increase of 10% or more in the number of its connections.

The information in this EIR constitutes the City's compliance with SB 610 and the analysis of water supply for the proposed General Plan Update. This compliance will not avoid future analysis required by development projects proposed consistent with the General Plan.

4.8.1.g Groundwater Availability and Use

The City of Hanford receives its water supply from the underlying ground water aquifers. The City currently pumps approximately 10,200 acre feet per year (AFY) of water (2001 report of pumping from the City). Based on a service population of approximately 44,000, the City-wide average per capita water use in Hanford is 207 gallons per day. This water consumption figure is down from 249 gallons per day in 1993. The City attributes this reduction to water conservation efforts and improved water system monitoring and reductions in water loss in the system (pers. con. G. Misenhimer, 2002). Based on population and average household size the average demand for residential development is about 2.9 acre feet per year. In addition to demands on the public system, minor amounts of groundwater are used for industrial purposes located outside of the City, but within the Planning Area. Other major industrial users of groundwater apart from the City's system are the Contadina cannery and the GWF power facility.

The City of Hanford has adopted a water conservation ordinance which enforces limitations on domestic use of water, and requires water meters on all new development within the City. The City provides water supply from 18 existing wells. At least 3 new wells and 2, 2 million gallon storage tanks are planned within the next five years to accommodate growth and address enhanced water quality standards. These improvements are consistent with the Water System Plan adopted by the City in November 1996. This Plan evaluated the water supply and distribution within the General Plan Urban Limits.. The static water level in the wells currently is at a depth of approximately 150 feet. This represents a drop of approximately 10 feet over the past five to six years. The City's domestic withdrawal of ground water is from the below the E-Clay and does not have a direct correlation to drops in groundwater at shallow depths.

In a 1991 preliminary analysis of water use in Kings County, Summers Engineering estimated that, in the average, 963,000 acre-feet per year of surface water is delivered to Kings County. The Kings River and other local sources contribute an average of 600,000 acre feet, while the State Water Project (SWP) provides 183,000 acre-feet and

the Federal portion of the Aqueduct supplies 180,000 acre-feet. Most of the SWP water is delivered to TLBWSD, while all of the Federal water from the Aqueduct is delivered to Westlands Water District.

Based on 550,000 acres of irrigated land with an annual water demand of 2.4 acre-feet per acre, Summers estimated that the total demand for agricultural water in Kings County was 1.4 million acre-feet per year. Therefore, under average conditions, an annual irrigation water deficit of 437,000 acre-feet occurs in Kings Country. The Summers analysis presumed that this deficiency would be fulfilled with groundwater. However, it should be noted that as an alternative to pumping groundwater, farmers may choose to take land out of production or apply less than the full irrigation requirement. (Kings County General Plan).

The Summers analysis also indicated that in 1991 (near the peak of the drought) only 205,000 acre-feet of surface water was delivered to Kings County. This supply consisted of 160,000 acre-feet from local rivers and 45,000 acre-feet of water from the Federal portion of the Aqueduct. No state water from the California Aqueduct was delivered. The surface water deficit for 1991 was estimated to be approximately 1,200,000 acre-feet.

According to information from DWR, the combined demand for urban and agricultural groundwater in the TLHSA is estimated to be 672,000 acre-feet per year under average conditions. Urban uses account for 24,000 acre-feet, or about 3.6% of the total demand.

4.8.1.h Groundwater Recharge and Discharge

Recharge of groundwater in the Hanford area occurs by: (1) direct infiltration of precipitation falling in the area; (2) infiltration of surface water entering the area in natural or manmade drainage; (3) infiltration of a portion of water spread for irrigation (either surface water from drainage or pumped ground water); (4) underflow of ground water into the area from the north and east; and, (5) artificial recharge of excess surface water by KCWD and treated wastewater by City of Hanford.

The City of Hanford has approximately 568 acre-feet of drainage basins, which percolate storm drainage water and excess domestic water all year around. This is an effective measure for local recharge of storm water and excess water which may be other wise lost to evaporation/transpiration. The City's drainage system disposes storm water basins which percolate water to the unconfined aquifer. Although some water is lost to evaporation, basins are concentrated which minimizes this loss. The City is currently planning for additional basins, most of which will be along the joint use irrigation facilities through the City. These basins will be designed specifically to assist future recharge purposes, as well as storm water control.

4.8.2. Impact Analysis

4.8.2.a Methodology

Water demand for urban uses is forecasted based on historic municipal and agricultural water use in the City of Hanford and surrounding areas. Overall municipal (residential, commercial and industrial) water demand is estimated to be 207 gallons/day/capita.

Agricultural water demand in the Hanford area is estimated at 2.4 acre-feet/year. Groundwater conditions in the Hanford area is based on the Summers Engineering Report (1991).

4.8.2.b Significance Criteria

CEQA guidelines define significant hydrologic effects as those, which substantially degrade water quality, substantially degrade or deplete groundwater resources, or cause substantial erosion or siltation.

Potential hydrologic impacts identified in this chapter relate specifically to:

1. Effects of increased water demands on the quality and quantity of groundwater resources;

2. Potential degradation of surface water quality related to soil erosion and sediments carried in runoff.

3. Effects of increased stormwater runoff volumes and the effects of chemical pollutants carried in urban runoff on the quality of and beneficial uses of receiving waters;

4. Effects of increased impervious surface area on aquifer recharge;

5. Potential degradation of water quality from uncontrolled release of hazardous materials.

4.8.2.c Water Supply Impacts

The conversion of agricultural and vacant fallow lands within the Planning Area to proposed residential, commercial, and industrial land uses will result in an increase in the demand for groundwater. Based on a community-wide per capita water demand of 207 gpd. and a 2001 population of 44,111 (State Department of Finance estimate), the current water demand is approximately 10,200 ac.ft. per year. Assuming the General Plan 2025 build out (a population of over 85,000), the forecasted water demand would be about 19,820 acre-feet per year (see Table 4.8- 1). This new demand represents a 94% increase in the current urban water demand in the City, exclusive of significant water consuming industrial users.

The calculations of total water demand in Table 4.8- 1 are based on the agricultural consumption of 2.4 ac.ft. per year and a 55% percolation rate of irrigation. It is estimated that 80% of the land converted to urban development is irrigated. General Plan build-out in 2025 is estimated to convert 4,475 acres of agricultural land. This table also accounts for the net drainage recharge between agricultural land and urban land. Urban land will generate slightly more recharge to the City's drainage basins because of the increased amount of impervious surface and the characteristics of urban drainage basins over agricultural land. In the agricultural condition, the calculations assume that 55% of rainfall is percolated. In the urban condition, 35% of rainfall is lost to evaporation on hard surfaces and drainage basin surfaces, while 65% is percolated. This results in a

net increase for urban recharge efforts. The City produces treated wastewater that is provided for irrigation supply on 1,600 acres of land it owns or the effluent is provided to other agricultural users. Assuming a 20% treatment plant loss of total water and a 55% percolation rate as applied to agriculture, there is a return of groundwater extracted for urban use. The recharge deficit is not substantial. However, the City should continue to participate with the water districts in recharge programs and assist in obtaining additional supply of surface water that may be recharged.

Table 4.8- 1

Acre Feet of Recharge to Accommodate New Growth

Year	Water Demand Ac/Ft/Yr.	Ac/Ft/Yr. From Ag. Land Conversion	Net Drainage Recharge Ac/Ft/Yr	Wastewater Recycling	Recharge Deficit
2005	872	447	20	382	23
2010	2,495	1,279	57	1,094	65
2020	6,499	3,331	149	2,850	169
2025	8,955	4,590	206	3,928	232

Although the agricultural and urban water demands may be similar, the water sources may differ. It is assumed, urban water will be pumped from deep wells while the crop land could be irrigated with either surface water or shallow groundwater above the E-clay.

Another factor in the analysis of the groundwater impacts of the project is the source of the urban and agricultural groundwater. If, for example, the urban wells pump groundwater from the deeper aquifer and the agricultural wells (that serve the land designated for development) pump from the shallower aquifer system, the project could result in a net increase in pumping from the deeper aquifer and a net increase of water available in the shallower system. The underlying assumption is that groundwater pumped to serve urban uses is not totally lost. Approximately one-half of the water consumed by urban uses ultimately is treated at a wastewater treatment plant and disposed of by irrigation of crop land. The development of the proposed land uses will result in a increase in the amount of wastewater treatment plant effluent that is reclaimed as part of the overall water balance.

Adding to the water balance calculation is the credit for recharge of storm water runoff. With the conversion of raw land to urban uses, substantial impermeable surface is added which deflects storm water. Urban development collects and channels this storm water to collection facilities where it is recharged into the ground water system, to the extent feasible. The loss of storm water from evaporation/transpiration is substantially reduced over raw land. In addition to storm water recharge, the City of Hanford is participating with irrigation districts to build larger basins and make them available for the recharge of excess surface water when available.

It is reasonable to assume that General Plan development will result in a greater demand on groundwater than the current irrigation practices of agriculture on that same land, since agricultural uses may have surface water available to meet their needs. The significance of this impact is reduced proportionately to the surface water that may now be used to irrigate other cropland that relied in the past on ground water to irrigate crops.

Despite the water balance calculations, there is a responsibility of local governments to participate with water districts in developing programs, which economically and cooperatively recharge ground water resources. This banking of resources for future reoccurring droughts is positive and beneficial to both urban and agricultural interests.

4.8.2.d Drainage Impacts

Build out of the General Plan Area will require the expansion of the existing storm water drainage system. Based on a preliminary study of the build out area an additional 2,060 acre feet of storm drainage basin capacity will be required. Given typical design standards, approximately 132 acres of land within the General Plan Area will be necessary to accommodate storm water needs. Additional acreage may be required for design modifications for multi-use facilities depending on the desirability of multi-use and accessibility. Prior drainage studies have strongly recommended the utilization of slough remnants as ingredients of drainage facilities. The General Plan Open Space and Conservation Elements supports this concept and provides implementation measures.

4.8.2.e Mitigation Measures

No mitigation measures are required beyond the Policies and Programs contained in the General Plan. The General Plan Open Space/Conservation, and Recreation Element, and the Public Facilities Element contains several Policies and Programs which mitigate impacts associated with implementation of the General Plan. Specifically Policy OCR Program OCR 3.2-A; Objective OCR 8, Policy OCR 8.1, Programs OCR 8.1-A & B; Policy OCR 8.2, Programs OCR 8.2-A & B; OCR 8.3, Program OCR 8.3-A; Policy OCR 8.4, Programs OCR 8.4 - A through C; Policy OCR 8.5; Policy OCR 8.6; Objective OCR 9, Policy OCR 9.1, Program OCR 9.1-A; Policy OCR 9.2, Policy OCR 9.2 – A; Program OCR 10.1 – B; Policy PF 4.1; Policy PF 4.2; and Program PF 4.3 – A; Policy PF 8.1.

Level of Significance After Mitigation

Less than Significant

Mitigation Implementation and Monitoring Responsibility

Implementation: The City of Hanford Community Development Department through the Site Plan Review Committee shall be responsible for the implementation of the mitigation measures through the Building Permit, Site Plan Review, and/or subdivision review process.

Monitoring: The various implementing departments of the City of Hanford are

responsible for administering the City's Site Plan Review and Subdivision Ordinance processes. An application for a Certificate of Occupancy is required prior to completing a project. The conditions of approval are checked prior to issuing a Certificate of Occupancy.

4.9. LAND USE

4.9.1. Environmental Setting

The Hanford General Plan Planning Area consists of approximately 18,900 acres. As shown in Figure 4.9- 1, the Planning Area includes the entire area of the City of Hanford and is generally coterminous with the Hanford Sphere of Influence. The current Planning Area was established with the 1994 General Plan Update and the Sphere of Influence was adopted shortly thereafter. Sufficient land exists within the Planning Area for build-out of the City beyond the year 2025. The Planning Area is characterized by urbanized, rural and agricultural land uses. Almost all of the urbanized uses are located within the City of Hanford, with the exception of unincorporated islands east of the 10th Avenue. Most of the rural and agriculture uses are located within the Hanford Sphere of Influence in the unincorporated territory. Table 4.9- 1indicates the distribution of Planning Area acreage by jurisdiction.

Table 4.9- 1

Project Area Jurisdictional Summary

Territory	Acres
City of Hanford	8,570
Unincorporated Kings County	10,330
Total	18,900

4.9.1.a Existing Land Uses

A combination of site surveys, aerial photograph interpretations and information from public agencies were used to map existing land use information. Table 4.9- 2 provides a statistical summary of the land uses in the Planning Area.

4.9.1.a(1) Residential

There are approximately 3,500 acres of residential land uses (a combination of very low, low, medium, and high density) within the City of Hanford. Residential land use accounts for approximately 40 percent of all existing land uses in the City. The proposed General Plan Land Use Map identifies approximately 7,640 acres of residential land or about 40% of the total Planning Area.

4.9.1.a(2) Agriculture

There are approximately 8,002 acres of agricultural land uses in the Planning Area. Agricultural uses within the Planning Area range from small hobby farms to commercial scale agricultural operations that are without urban services. Agricultural uses account

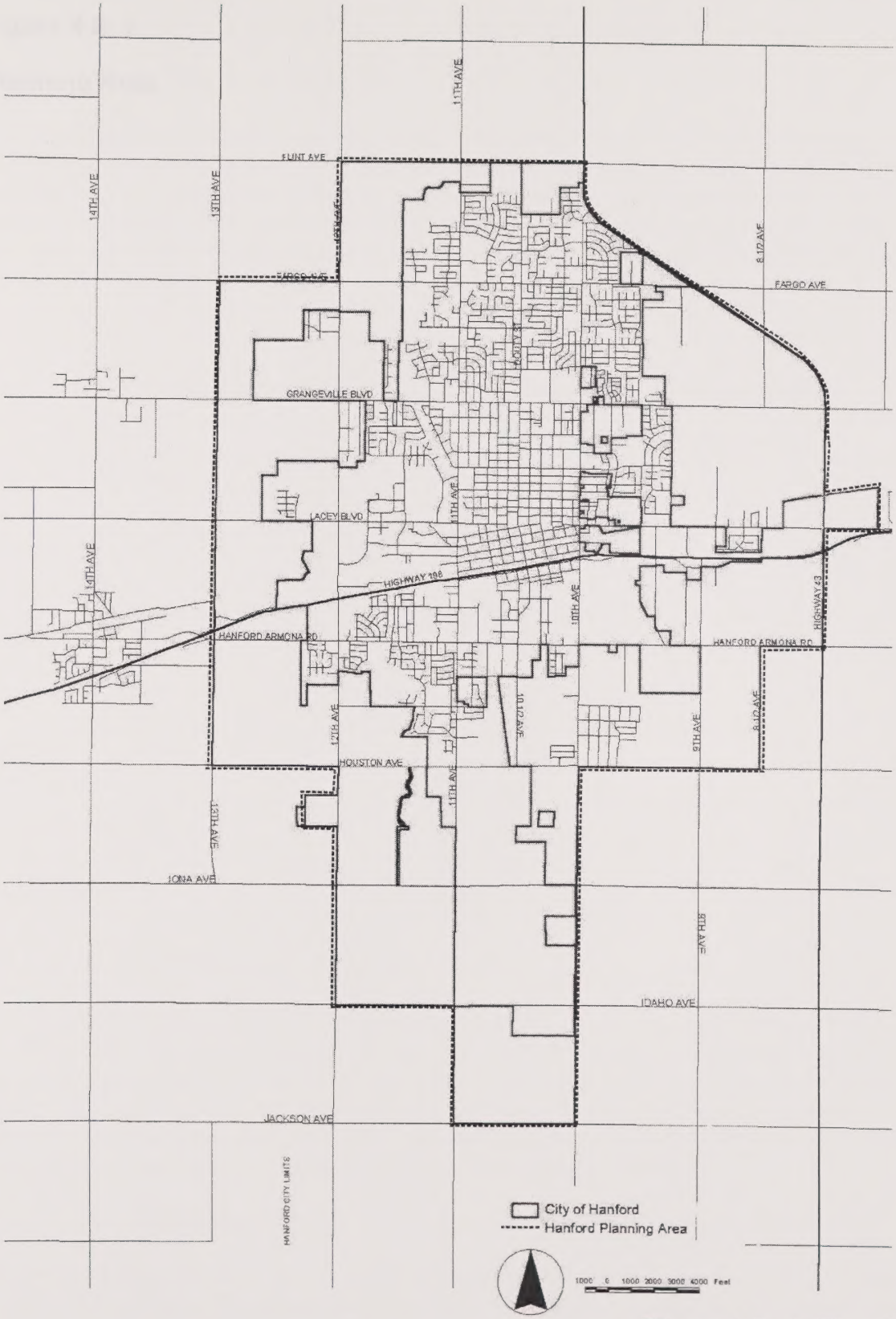


Figure 4.9 - 1, Planning Area

Figure 4.9- 1

Planning Area

for approximately 42 percent of all existing land use acreage in the Planning Area.

4.9.1.a(3) Commercial

There are approximately 1,350 acres of commercial land uses in the Planning Area. Commercial land uses include; neighborhood and community commercial centers, service commercial uses, and strip retail development. Some of the commercial land uses are located in the unincorporated territory within the urban area of the City of Hanford. Commercial accounts for approximately seven percent of all existing land uses within the Planning Area.

Table 4.9- 2

Distribution Of Existing Land Uses In The Project Area

Land Use	City of Hanford	Unincorporated Kings County	Total
Residential Very Low	203	0	203
Residential Low	2,663	1,153	3,756
Residential Medium	610	34	634
Residential High	83	0	83
Agriculture	0	8,002	8,002
Commercial	923	427	1,350
Office	244	28	272
Industrial	1,220	392	1,612
Public Facilities	1,011	9	679
Quasi Public/ right-of-way	1,490	312	1,802
Parks/Open Space	96	0	96
TOTAL ACRES	8,568	10,331	18,889

4.6.1.4 Office

There are approximately 272 acres of existing office uses in the Planning Area. Almost all of the office uses are located in the City of Hanford, with a small portion located in the unincorporated territory within the urban area of the City. Office development in Hanford is fragmented and scattered throughout the City with major concentrations in the commercial core area. The City has defined a professional office district. Office uses accounts for less than 1.4% of all existing land uses in Hanford.

4.6.1.5 Industrial

There are approximately 1,612 acres of existing industrial uses in the Planning Area. Most of the existing industrial use area is located within the Kings industrial Park. Much of the industrial uses located in the City are repair oriented, manufacturing and some warehouse uses. Industrial uses account for approximately 8.5 percent of all existing

land uses in the Planning Area.

4.9.1.a(4) Schools, Public Facilities, Quasi Public Facilities

There are 841 acres of existing schools, public facilities (e.g. City waste water treatment plant), and quasi-public facilities (e.g. electrical transfer stations, cemeteries, hospitals) in the Planning Area.

4.9.1.a(5) Parks and Open Space

There are approximately 170 acres of parks/open space in the Planning Area. This area accounts for a little less than one percent of the land uses in the Planning Area, and all of the area is located within the urban area of Hanford.

4.9.1.b Vacant Land

As shown in Table 4.9- 3 there are approximately 11,228 acres of vacant land (including agricultural) in the Planning Area. Approximately 59 percent of the entire Planning Area is vacant. Vacant land is scattered throughout the Planning Area. However, the largest amount of vacant land is located within the unincorporated Kings County. This land is primarily devoted to agriculture either in active crops or fallow. Approximately 8 percent (880 acres) of the land in the unincorporated territory within the Planning Area is considered urban in nature. This land are either islands or just adjacent to the City of Hanford. These areas are primarily east of 10th Avenue between Grangeville Blvd. and Highway 198. Two other minor segments of urban land exist surrounding the City. One is also east of 10th Avenue south of Hanford Armona Road. The other is West of 12th Avenue near Grangeville Blvd.

Approximately 3,545 acres of land in the unincorporated territory of the Planning Area are under Williamson Act contracts. In the City limits, approximately 87 acres of land remain under contract. Between 1994 and the end of 2001, property owners representing 567 acres filed for non-renewal. Most of the non-renewals of these contracts have occurred on the westside of the City between 12th Avenue and 13th Avenue and between Highway 198 and Fargo Avenue. This land can be served by the City sewer system and was identified in the 1994 General Plan as a logical growth area of the City. The preponderance of land in the Planning Area under contract is located south of Highway 198. In the eastern portion of the Planning Area (north of Highway 198) an estimated 765 acres of land is in Williamson Act contracts. The western portion of the Planning Area (north of Highway 198) has about 835 acres under contract. See Table 4.9- 4.

Table 4.9- 3

Estimated Vacant Land Within The Planning Area

Land Use	City of Hanford		Unincorporated Kings County		Total
	Total Acres	Vacant Land	Total Acres	Vacant Land	
Very Low Residential	246	65	1,196	1,150	1,442
Low Density Residential	3,151	615	2,750	2,250	5,901
Medium Density Residential	739	80	163	130	902
High Density Residential	101	25	35	35	135
Subtotal	4,236	785	4,145	3,565	8,381
Agriculture	104	104	2,600	2,600	2,704
Commercial	1,117	250	770	635	1,887
Office	295	40	80	80	375
Industrial	1,477	435	2,066	1,970	3,543
Public Facilities	1,223	45	561	495	1,784
Open Space	116	116	108	108	224
TOTAL	**8,568**	**1,775**	**10,331**	**9,453**	**18,899**

Table 4.9- 4

Land Under Williamson Contract within the Planning Area

Location of Contract Land	Estimated Acreage Currently Under Contract	Cancellation between 1994 and 2001
Westside north of Hwy 198	835	567
West and south of Hwy 198	1,945	0
Eastside north of Hwy 198	765	0
Total	3,545	567

4.9.1.c City of Hanford General Plan

The current Hanford General Plan is comprised of eight individual elements: Land Use; Circulation; Hazards Management (Seismic, Safety, Noise, and Air Quality), Open Space, Conservation, and Recreation, Public Facilities, and Housing. The most recent major update to the General Plan was in 1994. At that time an expanded Planning Area was adopted along with a change in format concentrating on a policy format.

4.9.1.a(1) Land Use Element

The existing Land Use Element includes all of the areas within the City's existing boundaries and a portion of the adopted Sphere of Influence. The Land Use Element establishes four basic land use categories: residential, commercial, industrial, and

public and quasi-public facilities. A number of sub-land use categories are established for each of the basic categories.

4.9.1.d City of Hanford Redevelopment Planning Areas

The City of Hanford currently has one redevelopment project area, Kings Industrial Park. Project Area-1 was adopted by the City Council in 1975. It consists of about 1,000 acres and is know as the Kings Industrial Park. The Project Area contains a variety of commercial, industrial/manufacturing, open space, public and vacant parcels.

The Redevelopment Agency continues to consider a Project Area for the downtown and adjacent areas.

4.9.1.e Relevant Planning Programs Kings County General Plan

A total of 10,331 acres of the Plan Area is located within unincorporated Kings County, inside the existing City of Hanford Planning Area. Land use planning within this area is under the jurisdiction of Kings County. Most of the County General Plan designations for unincorporated lands within the Planning Area are Agriculture. There are number of locations that remain in the unincorporated territory which are inside the Hanford urban area. Public services, water and sewer, are provided to some of these areas by the City. A rural development in the southern part of the planning area has established a District to provide domestic water services.

4.9.1.f Regional Planning Programs

4.9.1.a(1) Kings County Council of Governments

The Kings County Council of Governments is a voluntary association of local governments, one of nineteen in California and 522 nationwide. The major role of the Council to foster intergovernmental coordination, undertake comprehensive regional planning with an emphasis on transportation, provide for citizen involvement in the planning process and to provide technical services to its member governments. It is responsible for a wide range of regional plans for the County as defined below:

4.9.1.a(2) Regional Transportation Plan

The King County Regional Planning Agency (KCRPA) is the designated regional transportation agency for Kings County. The Agency has prepared a regional transportation plan for the County. The plan sets forth policies for future development of highways, transit Systems, air transportation, bicycle and pedestrian facilities. The Plan not only documents transportation now available, but also contains an assessment of the current system and projections to the year 2025.

4.9.1.a(3) San Joaquin Valley Unified Air Pollution Control District

The San Joaquin Valley Air Pollution Control District (SJVAPCD) is comprised of fifty-eight cities in eight counties: San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare and western Kern. The counties represent approximately sixteen percent of California's geographic area and have a population of 2.7 million persons. This area is

referred to as the San Joaquin Valley Air Basin. The basin is a non-attainment area for ozone and fine particulate matter (PM-10). A non-attainment area is an area identified by the U.S. Environmental Protection Agency and/or the California Air Resources Board as not meeting either National or California Ambient Air Quality Standards. The City of Hanford is located in a non-attainment area.

4.9.2. Impact Analysis

4.9.2.a Methodology

Analysis included comparing proposed Land Use Designations to the 1994 General Plan to determine increase, reviewing acreage in each land use, and comparing land uses to land requirements based on growth projections. Also compared in this analysis is the compatibility of existing land uses to proposed land use. As part of the analysis, the current Land Use Map and aerial photographs were used along with windshield surveys of area was conducted.

4.9.2.b Significance Criteria

State CEQA Guidelines define significant land use effects as those that

a) Physically divide an established community?

b) Conflict with any applicable land use plan, policy, or regulation of any agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

c) Conflict with any applicable habitat conservation plan or natural community conservation Plan?

Biological, transportation, air quality, population, agricultural, and housing impacts associated with land use are analyzed in other sections of this EIR.

4.9.2.c Impacts

Population projections at the 2025 General Plan build-out indicate that population may increase by about 38,664 to a total of 82,239. It is estimated that over 14,170 additional dwelling units would be required to house this new population on approximately 2,382 acres. It is also anticipated that commercial and industrial development will also grow at an equivalent rate to the existing ratio of commercial and industrial development in the City requiring an additional 942 acres. Accompanying the demand for residential, commercial, and industrial land will be additional school and educational facilities as well as parkland estimated at an additional 538 acres. It is estimated that a total of almost 4,082 additional acres will be converted into urban use by the year 2025 (does not include 1,346 acres shown as market revenue). The existing Planning Area as established in 1994 can accommodate all of the land necessary for the projected growth. The environmental impact report for the 1994 General Plan addressed the land

use issues for growth within the Planning Area as well as the impact to agricultural land. The City Council adopted a Statement of Overriding Considerations for the loss of agricultural land as an unavoidable significant impact.

The planned growth to 2025 may trigger the extension of major sewer development on the eastside of the Planning Area that is anticipated by the General Plan. This growth was contemplated by the 1994 General Plan. The General Plan Update maintains the eastside of the City as urban reserve with a combination of underlying residential, commercial, and public facility land uses. Extension of sewer service to this area is necessary before the City will approve development. A Specific Plan or Master Plan and detail evaluation of the environmental impacts associated with the sewer extension and initiating growth in this area shall be the subject of a future environmental analysis at the time development is proposed. Beyond the loss of agricultural land, the City has not identified any significant environmental impacts that can not be reduced to a less than significant impact with the implementation of General Plan Objectives, Policies, and Programs.

The anticipated growth in the City is contained within the Planning Area first established in 1994 and only a minor expansion (125 acres east of Highway 43 at Lacey Blvd.) is proposed that boundary in this General Plan Update. (See Table 4.9- 5 for the land use changes between the current Land Use Map and the Proposed Land Use Map). This area was under consideration for highway oriented services by a developer. The City desires that any such development should be created with urban services and within the Planning Area of the City. The City maintains that Highway 43 is the eastern boundary of the Planning Area with the exception of this single site development located near the intersection of two State Highways on land already designated for urban land use by Kings County. The City proposes development conditions as part of its Policies and Programs for this location that would reduce the potential significant impact to less than significant.

Table 4.9- 5 shows the net change in land use acreage between the current General Plan and proposed General Plan. This table correlates the proposed Land Use Map changes (See Figure 3.1-3 in the Land Use Section of this EIR). Most of the substantial proposed changes deal with removing the designation Urban Reserve from the underlying land use (such as in the northwestern portion of the Planning Area) or modifications to the underlying land use on the eastside of the Planning Area. The New Hanford High School/Learning Center is shown as Public Facilities in the western portion of the Planning Area between Lacey Blvd. and Grangeville. The New Hanford High School/Learning Center represents the largest change in proposed land use in the western portion of the Planning Area. This proposed project of approximately 180 acres will provide for the educational and recreational needs for Hanford's growing population. The 1994 General Plan designated the planned location of the New Hanford High School/Learning Center as a combination of Very Low Density and Low Density Residential. Public Facilities such as the New Hanford High School/Learning Center can be proposed in any zoning district in the City. The proposed land use changes does not reduce the amount of planned Very Low Density and Low Density residential land nor is the estimated population and housing carrying capacity of the General Plan reduced.

Proposed modifications to the eastern portion of the Planning Area accommodate the net reduction in residential land in the western portion of the Planning Area.

Table 4.9- 5

Comparison of Land Use Designations Between the Existing General Plan and Proposed General Plan

Land Use Designation	2002 Plan Update Acres	1994 Plan Acres	Acres Difference
Residential VLD	1,400	1,344	56
Residential Low	5,353	5,287	66
Residential Med	774	1,068	-294
Residential High	118	177	-59
Agriculture	2,686	2,686	0
Commercial	1,693	1,850	-157
Office	324	126	198
Industrial	3,286	3,286	0
Public Facilities	1,572	1,277	295
Right-of-ways	1,490	1,490	0
Parks/OS	204	184	20
Total	**18,899**	**18,774**	**125**

The City's current General Plan contains policies and programs that reduce infrastructure carrying capacity near the Planning Area boundaries. Development projects that are proposed must develop infrastructure consistent with these policies, including planned public facilities such as the New Hanford High School/Learning Center. The City adopted and maintains these policies and programs specifically to preserve the Planning Area boundary and not to encourage encroachment into agricultural lands. City policy remains consistent in that urban development should not extend beyond the Planning Area and all urban development should be developed in the City. Placement of the New Hanford High School/Learning Center at the edge of the Planning Area is consistent with the General Plan in that it will not be growth inducing beyond the Planning Area boundary. Infrastructure serving the facility will not be sized to allow extension beyond the Planning Area boundary. Additionally, City General Plan policy would oppose urban scale development outside of the City's Planning Area in the unincorporated territory.

The western portion of the Planning Area is primarily used for intensive agriculture. It is considered highly disturbed agricultural land. Biotic surveys have shown that the land is low value habitat, however it may be used for foraging by transient species passing through the area. While sightings of sensitive or threatened species have been seen near the Planning Area, no species have been identified within the Planning Area. Over time conditions may change as more site specific investigations are accomplished. There is the potential that one or more transient sensitive or threatened species may be present. However, none of the Planning Area is currently in any habitat conservation

plan or would conflict with any mitigation program.

The loss of agricultural land was addressed in the 1994 General Plan with a Statement of Overriding Considerations. Approximately 570 acres of agricultural land within the western portion of the Planning Area have filed for non-renewal of Williamson Act contracts. This represents about 16% of the agricultural land under Williamson Act contract within the Planning Area since 1994. When taken in context with the expectations of the 1994 General Plan, the absorption of agricultural land was anticipated and is not exceeding expectations through 2001. The loss of farmland is considered a potentially significant impact.

Other land use changes in the proposed General Plan are considered minor and reflect changing conditions. In the 12th Avenue and Lacey Blvd. area (southwest quadrant), the General Plan Land Use Map shows a change from Planned Commercial (Regional Commercial) to Planned Office. This change does not modify significantly the intensity of devleopment already planned for that location. These proposed changes are consistent with the commercial nature of the area as envisioned by the 1994 General Plan and do not divide any established neighborhoods. The area is generally in agricultural production and does not conflict with any adopted plan to mitigate an environmental effect. The existing slough remnant remains as a Public Facility and will be protected from the impacts of development. Changes in the Land Use designations when developed consistent with City General Plan policy in this area are considered less than significant.

Land Use designation changes are also proposed in the southwest quadrant of 11th Avenue and Lacey Blvd. These changes reflect the transition of an older neighborhood (currently designated Medium Density Residential) to Office Residential use. Commercial and Office uses surrounding the older neighborhood have encouraged the transition of the neighborhood toward home offices provided that on-site access and parking issues can be addressed through the site review process. Because the neighborhood is surrounded by commercial and office uses and borders the SJVRR tracks, the transition of an older neighborhood to Office Residential would not divide an established neighborhood since the neighborhood is already surrounded by non-residential uses. The neighborhood is within an urban area and has little value for habitat conservation. Transition of this area consistent with City General Plan policies and programs are considered less than significant.

In two of the older neighborhoods of the City (along Reddington Street and on Grangeville Blvd. between Douty Street and 10th Avenue) Office Residential is being proposed in the Updated General Plan. In addition, to adding area to the Office Residential area already existing along Douty Street and Irwin Street, Reddington Street is being added. This designation is coupled with additions to the General Policy regarding historical preservation of important structures and maintaining the historical appearance of these neighborhoods that are in transition. Changing the land use designation along Grangeville Blvd. from Low Density Residential to Office Residential is also a reflection of changing conditions. Grangeville Blvd. has been widened to four lanes and all on street parking has been eliminated. Without circular driveways residential uses must back out into traffic to leave the dwellings. Residential units have been vacated and remain empty. The General Plan Advisory Committee considered alternatives and recommends that Office Residential be allowed provided that off street

parking can be created and that the uses will not be disruptive to adjoining residential uses. Expanding the land use to include Office Residential would not divide the existing neighborhood and the General Plan policies and programs specifically adopted for this area would ensure that adjoining residential areas would be protected from objectionable uses. The area is urbanized and has little value as habitat. Implementing the land use changes will have a less than significant impact.

The 1994 Land Use Element sets forth the planned distribution and intensity of development in the Planning Area. The Land Use Element contains four residential land use designations ranging in density from 0 to 22 units per acre. A total of 10 non-residential land uses with a floor area ratio ranging from .01 to 2.0 are also contained in the Land Use Element. Additionally, the Land Use Plan has three other categories that identify unique land uses such as Agriculture, Open Space, and Public Facilities. Public Facilities includes parks, schools, public buildings, hospitals, drainage and water treatment facilities, and the Fairgrounds. Included in the Public Facility land use designation is the New Hanford High School/Learning Center Project.

The proposed modifications to the Land Use Element add two new land use designations and change the title of one existing land use designation. The two new land use designations are Planned Office and Planned Highway Development. The title of Regional Commercial is proposed to be changed to Planned Commercial. Changes in the title and additional land use designations are not considered significant.

The actual development of land uses proposed in the General Plan is dependent upon a number of variables, including site-specific constraints and market forces. Target intensity/density describe the level of development that is expected to occur with implementation of the General Plan. It is important to note that the forecasted population and dwelling units represents a 2025 build out. The target intensity/density is the midpoint of the development range. Maximum development would occur in instances where a proposed project provides public amenities or benefit.

Table 4.9- 6 provides a statistical summary of land uses in the Planning Area. The summary shows the range of development permitted under the proposed General Plan as well as anticipated level of development utilizing target intensity/density, and also including a 50 percent reserve of undeveloped residential land. This table does not demonstrate full build-out within the Planning Area because of the amount of reserve land accounted for in the "net acreage". Therefore, the carrying capacity of the General Plan exceeds the forecasted population of 2025 (82,230). Anticipated population that could be accommodated by the land use plan is 101,189. If the City's growth rate of 2.8% were sustained for the future, the City would reach this population in the year 2032.

Development at target intensity/density could result in a total of over 35,700 dwelling units in the Planning Area. Development of non-residential uses using typical FAR's is estimated to be in the magnitude of approximately 47.6 million square feet within the Planning Area. Based on the available square feet by type of business and estimated number of employees per 1,000 sq.ft., approximately 37,600 jobs would be present within the Planning Area. This creates a housing to jobs ratio of 1.05:1. A housing ratio of 1:1 is desirable as a sustainable community.

Table 4.9- 6

City of Hanford General Plan Land Use Summary

Land Use	Density Range[1]/ FAR[2]	Gross Acres	Net[3] Acres	Dus[4]/sq.Ft	H.H. Size/ sq.ft/ Job	Pop.	Jobs	% of Total
RESIDENTIAL								
Agriculture (1 DU/2OAC)	1 DU/20 AC	2,704	2,623	131	2.84	373	131	0.35%
Very Low (2 DU/AC)	0-3 DU/AC	1,442	1,103	2,207	2.84	6,267		
Low (5 DU/AC)	2-9 DU/AC	5,901	4,514	22,571	2.84	64,102		
Medium (12 DU/AC)	7-15 DU/AC	902	767	9,200	2.84	26,128		
High(15 DU/AC)	10-22 DU/AC	135	115	1,728	2.50	4,319		
Subtotal		8,381	6,499	35,706		101,189	131	0.35%
NON-RESIDENTIAL								
Commercial	.25-2.0 FAR	1,887	925	16,113,723	1.1		17,725	47.12%
Office	.25-.75 FAR	375	141	2,451,855	1.25		3,065	8.15%
Industrial	.25-1.0 FAR	3,543	1,860	20,254,384	0.5		10,127	26.92%
Public Facilities	.1-1.0 FAR	1,784	1,338	8,744,449	0.75		6,558	17.44%
Parks/Open Space	.01-.15 FAR	224	213	9,279	1		9	0.02%
Subtotal		7,814	4,477	47,573,690			37,485	99.65%
TOTAL		18,899	13,599			101,189	37,616	100%

1. Densities reflect an average gross density based on the permitted range of dwelling unit per acre for each category.

2. Building intensities are expressed in Floor Area Ratio (FAR) which is the ratio of the building area to the total area of the parcel on which it stands. Residential density is expressed in dwelling Units per gross acre (U/AC). Gross acres include land that must be removed for local streets, parks, collector and arterial reads, and infrastructure.

3. Net acres reflect the removal of land for local parks, local, collector and arterial streets, infrastructure, and a reserve of vacant land to maintain internal development competitiveness.

4. Non-residential square footage is determined by multiplying the net acres by the appropriate estimated average FAR.

Full development under the General Plan could result in significant increases in the amount of residential and non-residential development within the Planning Area. Most of the currently vacant land within the Planning Area is devoted to agriculture (productive or non-productive).

The Planning Area is characterized as an urbanizing area, the City core area, surrounded by agricultural areas in the unincorporated territory. Development as proposed in the General Plan would change the character of land uses within the Planning Area, from an essentially rural to an urban environment.

While some open space areas would be retained, implementation of the Land Use Plan

consistent with the policies and programs of the General Plan would allow the orderly development of the Planning Area to an urban setting. The loss of agricultural and undeveloped land to both residential and non-residential uses is a significant impact. However, this significant impact can be minimized through implementation of the General Plan goals and policies and actions, particularly in the Land Use Element. A main purpose of the Land Use Element is to ensure future development follows a consistent and orderly pattern. Prior to approving development entitlements, the City must find that such projects are consistent with the General Plan. Additionally, as large scale development projects are considered, Master Plans and additional environmental review would ensure impacts are adequately assessed and mitigation if required implemented. Therefore, significant impacts associated with intensification of development would be mitigated to a less than significant level.

The General Plan at build-out will not displace existing residents, but is intended to distribute existing and new residents throughout the City in an orderly manner. New development which is consistent with the development standards as outlined in the proposed General Plan and Zoning Ordinance will better utilize existing land, as well as minimize incompatible development. The community will not be divided, but will expand with compatible and timely development to accommodate a growing population. The City does not plan to expand beyond the existing Planning Area boundaries as established in 1994, except for a small area near Highway 43 and Lacey Blvd. The General Plan contains implementable policies and programs to restrict growth within the Planning Area and preserve open space and surrounding agricultural lands

The proposed General Plan contains policies encourage the preparation of Master Plans or Area Plans for proposed annexations or major development projects in the City. These plans are required to provide details for the phasing of development and provision of infrastructure to support development.

4.9.2.d Mitigation Measures

The General Plan Land Use Element contains substantial Objectives, Policies, and Programs focused on managing growth within the Planning Area and avoiding a range of significant impacts not only related to this section of the EIR. Other General Plan Elements also provide Objectives, Policies, and Programs that support and complement the Land Use Element Objective, Policies, and Programs. The Circulation Element, Open Space/Conservation, and Recreation Element, Hazards Element, and the Public Facilities Element all contain Policies and Programs that help mitigate impacts associated with implementation of the General Plan, particularly growth management policies. Specifically: Objective CI-1, Policy CI-1.1, Policy CI 1.2, Program CI 1.2-A, Program CI 1.2-B, Policy CI 1.3, Policy CI 1.4, Policy CI 1.8, Policy CI 8.6, Policy CI 9.1, Policy CI 9.3; Objective HZ 4, Policy HZ 4.2, Objective HZ 6, Policy HZ 6.1, Policy HZ 6.2, Policy HZ 6.3, Policy HZ 6.4, Policy HZ 6.5, Policy HZ 6.6; Objective OCR 1, Policy OCR 1.1, Programs OCR 1.1 - A & B, Policy OCR 1.2, Programs OCR 1.3 - A, Policy OCR 3.1, Policy OCR 3.2, Objective OCR 7, Policy PF 1.3, and Policy PF 1.4, Program PF 1.4-A, and Program PF 1.4-B.

Level of Significance After Mitigation

> ***The impact for the loss of agricultural land remains unavoidable and significant. A Statement of Overriding Considerations will be required. All other impacts are considered Less than Significant.***

Mitigation Implementation and Monitoring Responsibility

Implementation: The City of Hanford Community Development Department through the Annexation, Subdivision Map, and project review processes shall be responsible for recommending findings of consistency with the General Plan. The Hanford Planning Commission and City Council are responsible for adopting such findings of consistency prior to project approval.

Monitoring: The various implementing departments of the City of Hanford are responsible for administering the City's Site Plan Review and Subdivision Ordinance processes. An application for a Certificate of Occupancy is required prior to completing a project. The conditions of approval are checked prior to issuing a Certificate of Occupancy.

4.9.2.e Impacts on Agricultural Lands

Through the intensification of urban land uses in the Planning Area, there would be a significant loss of agricultural lands. Despite the fact that between 1994 and 2001 the City has acquired approximately 1,600 acres of land south of the Planning Area to be maintained in perpetual agriculture, the loss of agricultural land within the Planning Area is estimated at 6,551 acres is considered significant and unavoidable. This impact is in Section 4.1, Agricultural Resources.

4.10. MINERAL RESOURCES

4.10.1. Environmental Setting

Resource extraction involves the removal of natural resources from their place of discovery.

The only significant mineral commodities that might be found within the Hanford Planning Area are sand and gravel for road and building construction. At this time there are no known significant deposits, and no active mines. The Kings County General Plan indicates that there are no current mineral extraction activities occurring in Kings County. The Kings County General Plan references prior open pit gypsum and mercury mines, but they no longer exist.

Oil and Gas production in Kings County has diminished over the past 25 years and this trend is expected to continue (Kings County General Plan, 1996).

4.10.2. Environmental Analysis

4.10.2.a Methodology

There are no mineral resources found in the City of Hanford. No analysis is necessary.

4.10.2.b Thresholds of Significance

A significant impact would occur if the project would:

a) Result in the loss of availability of a known mineral resource that would be of that would be of future value to the region and the residents of the State?

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

4.10.2.c Impacts

There are no mineral resources found in the City of Hanford. No impacts are anticipated.

4.10.2.d Mitigation Measures

None Required.

Level of Significance After Mitigation

No Impacts.

Mitigation Implementation and Monitoring Responsibility

Implementation: None.

Monitoring: None.

4.11. NOISE

4.11.1. Environmental Setting

4.11.1.a Introduction and Definition

Noise is usually defined as unwanted sound. It consists of any sound that may produce physiological or psychological damage and/or interfere with human communication, work, rest, recreation, and sleep. People recognize that noise has become an environmental pollutant that threatens our quality of life. In this way, it is a form of energy waste from human activities.

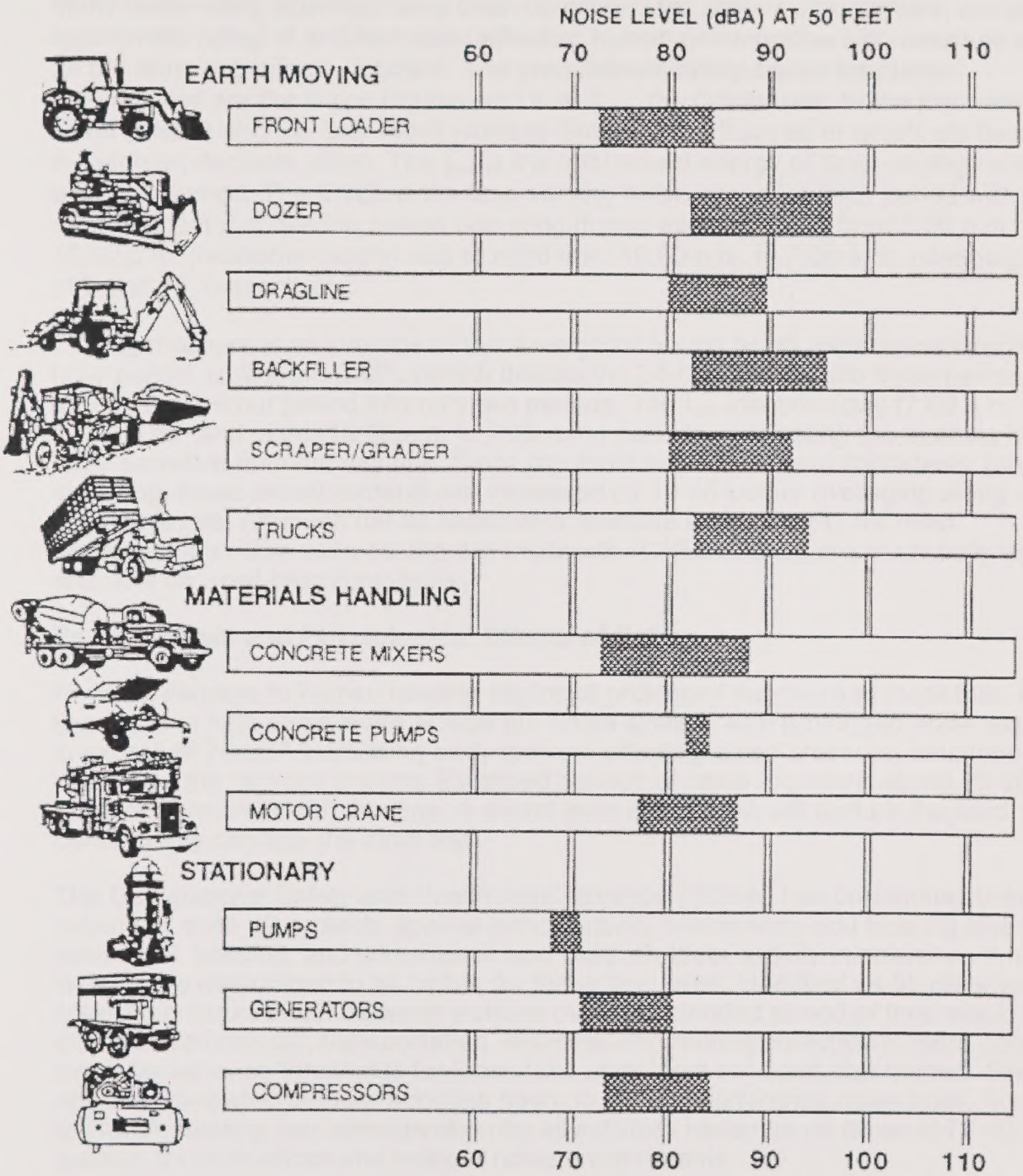
To the human ear, sound has two significant characteristics: pitch and loudness. The negative aspect of pitch is generally related to annoyance, while loudness can affect our ability to hear. Pitch is the number of complete vibrations (cycles per second) of a wave that result in the tone's range from high notes to low notes. Loudness is the strength of a sound that describes a noisy or quiet environment, measured by the amplitude of the sound wave. Loudness is determined by the intensity of the sound waves combined with the reception characteristics of the ear. Sound intensity refers to how hard the sound wave strikes an object, which in turn, produces the sound's effect. This is a characteristic of sound, which can be precisely measured with monitoring instruments.

Measurement of Sound

Sound intensity or acoustic energy is measured in decibels (dBA) that are weighted to correct for the relative frequency response of the human ear. For example, an A-weighted noise level includes a de-emphasis on high frequencies of sound that are heard by a dog's ear, but not by a human's ear. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Unlike linear units (inches or pounds), decibels are measured on a logarithmic scale, representing points on a sharply rising curve.

Since noise is measured on a logarithmic scale, 10 decibels is 10 times more intense than one decibel, 20 decibels is 100 times more intense and 30 decibels is a 1,000 times more intense. Thirty decibels represents 1,000 times as much acoustic energy as one decibel. A sound as soft as human breathing is about 10 times greater than zero decibel. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. Ambient sounds generally range from 30 dBA (very quiet) to 100 dBA (very loud). Various sound levels corresponding to typical sources are provided in Figure 4.11- 1.

Sound levels are generated from a source and their decibel level dissipates exponentially as the distance from that source increases. For a single point source, the sound level decays approximately six decibels for each doubling of distance from the source. If noise is produced by a line source, such as highway traffic or railroad operations, the sound will decrease three decibels for each doubling of distance in a hard site environment. Line source noise in a soft environment, which is relatively flat with vegetation, will decrease four and a half decibels for each doubling of distance.



Source: EPA, 1971 "Noise From Construction Equipment and Operations, Building Equipment, and Home Appliances". NTID300.1

Figure 4.11 –1 –Sound Levels and Sources

Many noise rating schemes have been developed for various time periods, but an appropriate rating of ambient noise affecting human communities also needs to account for the annoying effects of sound. The predominant rating scales for human communities are the Noise Equivalent Level (L_{eq}, the Community Noise Equivalent Level (CNEL) and the Day-Night Average Sound Level (L_{dn}), all of which are based on A-weighted decibels (dBA). The L_{eq} is the total sound energy of time-varying noise over a sample period. The CNEL is the time-varying noise over a 24-hour period with a weighing factor applied to noises occurring during evening hours from 7:00 p.m. to 10:00 p.m. (relaxation hours) and at night from 10:00 p.m. to 7:00 a.m. (sleeping hours) of 5 and 10, respectively.

The L_{dn} measure is an average of the A-weighted sound levels experienced during a 24-hour period. Unlike the CNEL (which divides the 24-hour period into three periods), L_{dn} divides the 2~hour period into only two periods. The L_{dn} identifies day (7:00 a.m. to 10:00 p.m.) and night (10:00p.m. to 7:00 a.m.) periods, eliminating the evening hours as more sensitive than the daytime. Since nighttime noise levels are considered more annoying, these measurements are increased by 10 dB before averaging along with the daytime levels. Although not as sensitive a measure as the CNEL, for most transportation noise sources, the two measures (CNEL and L_{dn} are essentially equal and may be used interchangeably).

Psychological and Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to more than 85 dBA. Exposure to high noise levels effects our entire system, with prolonged noise exposure in excess of 75 dBA increasing body tension, affecting blood pressure, functions of the heart, and the nervous system. Extended periods of noise exposure above 90 dBA will result in permanent cell damage. A sound level of 190 dBA will rupture the eardrum and permanently damage the inner ear.

The Occupational Safety and Health Administration (OSHA) has determined that a maximum of 45 dB protects against indoor activity interference and hearing loss for residential, hospital, and educational land uses. Outdoor activity interference threshold levels were determined to be higher for these land uses, identified as 55 dB where speech communication between workers over an extended period of time would be difficult. Commercial, transportation, industrial and recreation activities were considered highly variable, so thresholds for these land uses have not been determined. Similarly, agricultural-related outdoor activities have no stated interference noise level. According to OSHA, hearing loss consideration for all activities becomes an issue at 70 dB or greater, for both indoor and outdoor noise environments.

Sound Propagation

Noise sources can either be a "line source" (e.g., a heavily traveled highway) or a "point source" (e.g., a stationary engine or compressor). Highway traffic noise on high volume roadways stimulates a "line source" where a nominal three dBA drop with each doubling of distance occurs between the noise source and the noise receiver.

Environmental factors such as the wind direction and speed, temperature gradients, the

characteristics of the ground (hard or soft) and the air (relative humidity), and the presence of grass, shrubbery, and trees, often combine to increase the actual attenuation achieved outside laboratory conditions to 4.5 decibels per doubling of distance. Thus, a noise level of 69.5 dB at 50 feet from a highway centerline would attenuate to 65 dB at 100 feet, 60.5 dB at 200 feet, and so forth.

This is particularly true where the view of the roadway is interrupted by isolated buildings, clumps of bushes or scattered trees, or the intervening ground is soft or covered with vegetation and the source or receiver is located more than three meters above the ground. It should be noted, however, that the nominal value of three dBA with doubling applies to sound propagation from a "line source": (1) over the top of a barrier greater than three meters in height, or (2) when there is a clear unobstructed view of the highway, the ground is hard, there are no intervening structures, and the height of the line-of-sight averages more than three meters above the ground.

In an area, which is relatively flat and free of barriers, the sound resulting from a single "point source" of noise spreads in a spherical manner away from the source and drops by six decibels for each doubling of distance.

This applies to fixed noise sources and mobile noise sources which are temporarily stationary such as an idling truck or other heavy duty equipment operating within a confined area (such as an industrial site). Sound attenuation from a train resembles a line source near the railroad tracks and a point source at distances beyond three-tenths of the train length.

Land Use Compatibility

Land use compatibility with noise is an important consideration in the planning and design process. Some land uses are more susceptible to noise intrusion than others, depending on the nature of activities expected with that use. For instance, at educational facilities it is important to concentrate and to communicate. An interior noise level in excess of 50 dBA may interfere with these activities. Similarly, interference with sleep may occur at 45 dBA, so residential land use standards must reflect this noise level.

Some land uses are more tolerant of noise than others. These uses typically include activities that generate loud noise levels or those that do not require verbal interaction, concentration, or sleep. Commercial and retail facilities require very little speech communication, and therefore, are generally allowed a noisier environment. Some industrial areas generate loud noises that would interfere more with communication than all but the highest exterior noise levels.

The following discussions address the noise standards and those land uses deemed sensitive by state and regional jurisdictions. While most standards are considered guidelines, it is important to maintain reasonable ambient noise levels to protect the health and welfare of the community.

4.11.1.b Noise Standards State of California

Land uses deemed noise sensitive by the State of California include schools, hospitals,

rest homes, long term care and mental care facilities. Many jurisdictions also consider residential uses particularly noise sensitive because families and individuals expect to use time in the home for rest and relaxation, and noise can interfere with those activities. Some variability in standards for noise sensitivity may apply to different densities of residential development, and single family uses are frequently considered the most sensitive. Jurisdictions may identify other uses as noise sensitive such as churches, libraries, day care centers, hospitals, and parks.

Land uses that are relatively insensitive to noise include office, commercial, and retail developments. There is also a range of insensitive noise receptors, which include uses, which generate significant noise levels, or uses where the level of human occupancy is typically low. Examples of insensitive uses include: industrial and manufacturing uses, utility easements, agriculture, vacant land, parking lots, salvage yards, and transit terminals.

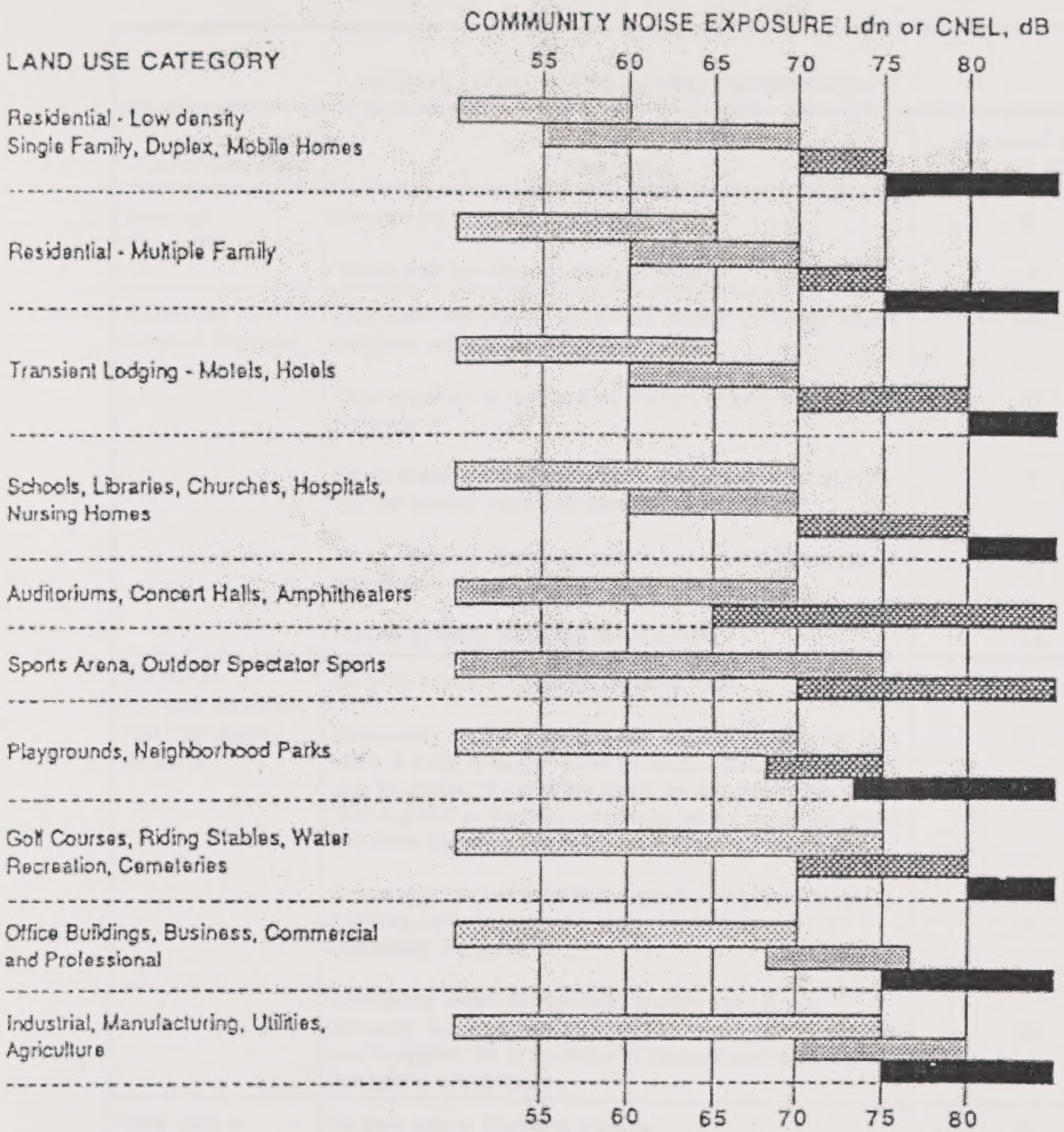
Figure 4.5-2 provides a noise/land use compatibility matrix developed by the State Office of Noise Control (ONC). The noise standards identified are intended to provide guidelines for the development of municipal noise elements. Depending on the environment of a particular community, these basic guidelines may be tailored to reflect the existing noise and land use characteristics of that community. Figure 4.11- 2 provides the noise level corrections to customize the state guidelines for use in local jurisdictions. This allows maximum flexibility for cities and counties to develop community specific policies, while maintaining generally accepted standards.

California's noise insulation standards were officially adopted by the California Commission of Housing and Community Development in 1974. In November 1988, the Building Standards Commission approved revisions to these standards (Title 24, Part 2, California Code of Regulations). The ruling states that "Interior noise levels attributable to exterior sources shall not exceed 45 dB in any habitable room.

The noise metric shall be either CNEL or L_{dn}, consistent with the noise element of the local general plan." Additionally, the commission specifies that residential buildings or structures to be located within exterior L_{dn} contours of 60 dB or greater of an existing or adopted freeway, expressway, parkway, major street, thoroughfare, rail line, rapid transit line, or industrial noise source shall require an acoustical analysis showing that the building has been designed to limit intruding noise to an interior L_{dn} of 45 dB.

4.11.1.c City of Hanford

The goal of the Hazards Element is to minimize the community's exposure to harmful impacts caused by natural and man made hazards and noise. When the Noise Element is adopted, the major noise sources of concern are State Highway 198, State Highway 41, Burlington Northern and Santa Fe Railroad (BN&SF), and San Joaquin Valley Railroad. Traffic noise from heavily traveled arterial and collector streets are also substantial sources of noise. The 1994 General Plan contained policies to reduce traffic related noise along heavily traveled streets. The policies require noise attenuation walls and “backing” residential uses to the heavily traveled streets. An analysis of projected traffic volumes conducted for the year 2025 does not alter the current policies.



LEGEND

Normally Acceptable
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Conditionally Acceptable
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice. Outdoor environment will seem noisy.

Normally Unacceptable
New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made with needed noise insulation features included in the design. Outdoor areas must be shielded.

Clearly Unacceptable
New construction or development should generally not be undertaken. Construction costs to make the indoor environment acceptable would be prohibitive and the outdoor environment would not be usable.

Source: California Office of Noise Control

Figure 4.11 –2 Land Use Compatibility

NORMALIZED NOISE LEVEL CORRECTIONS[1]

Type of Correction	*Description*	*Measured Ldn[2] Change (dBA)*
Seasonal Correction	Summer (or year-round operation).	0
	Winter only (or windows always closed).	-5
Correction for Outdoor Residual Noise Level	Quiet suburban or rural community (remote from large cities and from industrial activity and trucking).	+10
	Quiet suburban or rural community (not located near industrial activity).	+5
	Urban residential community (not immediately adjacent to heavily traveled roads and industrial areas).	0
	Noisy urban residential community (near relatively busy roads or industrial areas).	-5
	Very noisy urban residential community.	-10
Correction for Previous Exposure and Community Attitudes	No prior experience with the intruding noise.	+5
	Community has had some previous exposure to noise but little effort is being made to control the noise. This correction may also be applied in a situation where the community has not been exposed to the noise previously, but the people are aware that bona fide efforts are being made to control the noise.	0
	Community has had considerable previous exposure to the intruding noise and the noise maker's relations with the community are good.	-5
	Community aware that operation causing noise is very necessary and it will not continue indefinitely. This correction can be applied for an operation of limited duration and under emergency circumstances.	-10
Pure Tone or Impulse	No pure tone or impulsive character.	0
	Pure tone or impulsive character present.	-5

[1] Source: "Guidelines for the Preparation and Content of Noise Elements of the General Plan," California Office of Noise Control, February 1976.
[2] Corrections to be added to the measured, weighted 24-hour noise level.

Figure 4.11 –3 –Noise Level Corrections

Figure 4.11- 2 identifies "normally acceptable," "conditionally acceptable," "generally unacceptable," and "land use discouraged" noise levels for various land use types. As shown therein, the following exterior noise exposures are designated "conditionally acceptable" for residential uses: single and multi-family residential up to 65 L_{dn} and transient lodging (motels and hotels) up to 70 L_{dn} For non-residential uses, the following exterior noise exposures are "conditionally acceptable": schools, libraries, churches, hospitals, and nursing homes; golf courses, open space areas with walking/biking/horseback riding and quieter water-based recreation up to *65* L_{dn}.

Less sensitive uses such as office buildings, auditoriums, sports arenas, playgrounds and parks, and retail or service commercial are "conditionally acceptable" up to 70 L_{dn} while relatively insensitive wholesale commercial and industrial areas are up to 75 L_{dn}.

The category of "conditionally acceptable" indicates that new construction or development should be undertaken only after detailed analysis of the noise reduction requirements are made and that needed noise insulation features are incorporated into project designs. This is generally the planning criterion utilized for determining land use capacity. In addition, the City provides noise standards for land uses in the Hazards Element (Noise). The City's noise standards for land use compatibility are provided in Table 4.11- 1and Table 4.11- 2. These standards shall be adhered to and implemented during the review of all proposed development projects.

Table 4.11- 1

Maximum Allowable Noise Exposure to Ground Transportation Noise

Land Use	Outdoor Activity Areas [1]	Interior Spaces	
	L_{dn}/CNEL,dB	L_{dn}/CNEL,dB	L_{eq},dB[2]
Residential	60[3]	45	--
Transient Lodging	60[3]	45	--
Hospitals, nursing homes	60[3]	45	--
Theaters, auditoriums, music halls	--	--	35
Churches, meeting halls	60[3]	--	40
Office Buildings	--	--	45
Schools, libraries, museums	--	--	45
Playgrounds, neighborhood parks	70	--	--

Note: -- = not applicable
[1] Where the location of outdoor activity areas is unknown, the exterior noise-level standard shall be applied to the property line of the receiving land use.
[2] As determined for a typical worst-case hour during periods of use.
[3] Where it is not possible to reduce noise in outdoor activity areas to 60 dB Ldn/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB Ldn/CNEL may be allowed provided that available exterior noise-level reduction measures have been implemented and interior noise levels are in compliance with this table. Source: Brown-Buntin Associates 1991

The City of Hanford has not yet adopted a noise control ordinance. Noise complaints are currently addressed on an individual basis. Enforcement of noise control measures in new developments is also implemented individually; typically, the City requires noise studies for large developments. The Hazards Element identifies the development and adoption of a municipal noise ordinance.

Table 4.11- 2

Noise - Level Performance Standards for New Projects Affected By Or Including Non-Transportation Sources

Land Use	Noise-level Descriptor	Exterior Noise-Level Standard (Applicable at Property line)		Interior Noise-level Standard	
		Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Residential	L_{eq}	50	45	40	35
	L_{max}	70	65	60	55
Transient lodging, hospitals, nursing homes	L_{eq}	-	--	40	35
	L_{max}			60	55
Theaters, auditoriums, music halls	L_{eq}	--	--	35	35
Churches, meeting halls	L_{eq}	--	--	40	40
Office buildings	L_{eq}	--	--	45	--
Schools, libraries, museums	L_{eq}	--	--	45	--
Playgrounds, parks	L_{eq}	65	--	--	--

Notes: Each of the noise levels specified above shall be lowered by 5 dB for simple tore noises, noises consisting primarily of speech or music, or recurring impulsive noises. These noise-level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).

4.11.2. Impact Analysis

4.11.2.a Methodology

For highway impacts the Federal Highway Administration (FHWA) *Highway Traffic Noise Model* (FHWA-TNM) that was used to develop L_{dn} contours for selected roadways at various ADT's in the year 2025. The model is based upon reference energy emission levels for automobiles, medium trucks (2 axles),heavy trucks (3 axles or more), buses,

and motorcycles with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver and the acoustical characteristics of the site. The FHWA-TNM Model allows selection of L_{den}/CNEL, which is consistent with the noise standards selected by the City. To predict L_{den} values, it is necessary to determine the daily distribution of traffic for a typical 24-hour day and adjust the traffic volume input data to provide for daytime and nighttime traffic. Traffic data also provides for a percentage of automobile, truck, buses, and motorcycle mix for existing and projected future (buildout) conditions.

1994 Kings County Airport Land Use Compatibility Plan provided predicted noise contours for the Hanford Airport.

4.11.2.b Significance Criteria

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Implementation of the General Plan or projects approved consistent with the General Plan would have a significant impact if the standards shown in Table 4.11- 1and Table 4.11- 2 are exceeded.

b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.

4.11.2.c Impacts

Significant Noise Sources

Two types of noise sources should be considered in a community noise inventory, stationary sources and mobile sources. Fixed sources of noise include airports, train depots, industrial and construction activities, farming equipment operations, shooting ranges, air conditioning/refrigeration units, vehicle race tracks, concert halls, loud whistles or bells, outdoor sporting events including school stadiums, loud radio or television usage, lawn mowers, home appliances and barking dogs. Mobile noise sources are typically transportation-related and include aircraft, trains, automobiles,

trucks, buses, motorcycles, and off-road vehicles.

Although construction activities associated with public works projects or private development occur throughout the City, they are generally localized and temporary. There is a vehicle race track at the Kings County Fairgrounds located in the City of Hanford.

Motor Vehicle Noise

Noise levels adjacent to roadways vary with the volume of traffic, mean vehicular speed, and the truck mix. The noise levels adjacent to line sources of noise such as roadways increase by three dBA with each doubling in the traffic volume provided that the speed and truck mix do not change). From the mathematical expression relating increases in the number of noise sources (motor vehicles) to the increase in the adjacent noise level, it can be shown that a 26 percent increase in the traffic volumes on a given route increases the adjacent noise by one dBA. Changing the vehicle speed or truck mix has an even stronger impact on noise levels.

The truck mix on a given roadway also has a significant effect on the adjacent noise levels. As the number of trucks increases and becomes a larger percentage of the total vehicle volume, the adjacent noise levels increase. This effect is more pronounced if the number of heavy duty (3+ axle) trucks is large when compared to the number of medium duty (2 axle) trucks. Noise from motor vehicles is generated by engine vibrations, the interaction between the tires and the road, and the exhaust system. As vehicle speed increases, so does the noise from these areas of the vehicle. The noise level adjacent to the roadway is highly dependent on the average vehicle speed, especially at lower speed levels. The highest speeds are typically measured midlink, where traffic lights, stop signs and cross traffic provide less interference. Although some vehicles will go faster than the posted speed limit, in most areas, the average speed is just below this limit. The exception is found along long stretches of highway or streets outside City limits. Reducing the average motor vehicle speed decreases the noise exposure of receptors inside the car and those adjacent to the roadway. Similarly, an increase in vehicle speed results in higher noise levels.

State Highway 198, State Highway 43 and 10th Avenue have been identified as the existing major traffic noise sources within the City of Hanford. A 2025 estimate of noise was based on forecasted roadway volume provided by the traffic engineer. As growth continues in the City, arterial streets and some collector streets will require noise attenuation to meet City standards for noise in sensitive uses. In most circumstances traffic noise along arterial streets require noise attenuation walls and requiring houses to "back" onto to the major street as a means of reducing noise impacts to acceptable levels.

The FHWA TNM model was used to develop contours for these roadways. Experience with the use of the FHWA Model has indicated that the model generally overprotects traffic noise exposure by 1-2 dB in areas 100-200 feet from the center of roadways, and that its use will generally result in a conservative estimate of traffic noise exposure.

Appendix 4.5-A includes a summary of the traffic data used for the calculation of traffic noise exposure. These data along with the FHWA TNM model were used to calculate

the distance between the center of the roadways and the 60, 65, and 70 dB L_{den} shown in Table 4.11- 3. It should be noted that the noise contours did not take into consideration shielding caused by local buildings or sound attenuation walls. The distances reported in Table 4.11- 3 should be considered as worst-case estimates of noise exposure along roadways in the City without attenuation. Noise exposure protected by sound walls and behind the first row of houses or other types of buildings along a roadway will typically be reduced by 5-15 dB.

Table 4.11- 3

Predicted Transportation Noise On Future Street Systems

Street	Segment	Future Geometrics	Future Volume	L_{den} 60 @ ft.	L_{den} 65 @ ft.	L_{den} 70 @ ft.
Flint Ave.	13th Ave. to 12th Ave.	2 Lane	450	63	25	0
	12th Ave. to 11th Ave.	2 Lane	450	63	25	0
	11th Ave. to SH 43	4 lane	3,900	156	88	0
Fargo Ave.	13th Ave. to 12th Ave.	2 Lane	5,300	250	150	88
	12th Ave. to 11th Ave.	4 Lane	8,700	280	165	100
	11th Ave. to 10th Ave.	2 Lane	10,450	275	150	90
	9th Ave. to SH 43	4 Lane	15,700	280	165	100
Grangeville Blvd.	13th Ave. to 12th Ave.	4 Lane	11,600	280	165	100
	12th Ave. to 11th Ave.	4 Lane	14,100	280	165	100
	11th Ave. to 10th Ave.	4 Lane	20,500	388	230	112
	10th Ave. to 9th Ave.	4 Lane	20,000	388	230	112
Lacey Blvd.	13th Ave. to 12th Ave.	4 Lane	17,200	350	212	125
	12th Ave. to 11th Ave.	4 Lane	19,200	350	212	125
	11th Ave. to 10th Ave.	4 Lane	16,300	350	212	125
	10th Ave. to 9th Ave.	4 Lane	18,100	350	212	125
SH 198	13th Ave. to 12th Ave.	4 Lane	39,300	1,150	775	525
	12th Ave. to 11th Ave.	4 Lane	42,100	1,150	775	525
	11th Ave. to 10th Ave.	4 Lane	32,500	1,110	725	500
	10th Ave. to 9th Ave.	4 Lane	32,800	1,110	725	500
	9th Ave. to SH 43	4 Lane	20,900	388	230	112
Hanford-Armona Rd.	13th Ave. to 12th Ave.	4 Lane	4,050	156	88	0
	12th Ave. to 11th Ave.	4 Lane	8,500	156	88	0
	11th Ave. to 10th Ave.	4 Lane	11,400	280	165	100
	9th Ave. to SH43	2 Lane	600	63	25	0
Houston Ave.	13th Ave. to 12th Ave.	2 Lane	5,660	250	150	88
	12th Ave. to 11th Ave.	2 Lane	5,810	250	150	88
	11th Ave. to 10th Ave.	2 Lane	8,100	250	150	88
	10th Ave. to 9th Ave.	2 Lane	7,000	250	150	88
	9th Ave. to SH 43	2 Lane	6,900	250	150	88
13th Ave.	Hanford-Armona to SH 198	4 Lane	18,600	388	230	112
	SH 198 to Lacey Blvd.	4 Lane	18,800	388	230	112
	Lacey Blvd. to Grangeville	4 Lane	7,500	281	156	88
	Grangeville Blvd. To Fargo	2 Lane	6,400	250	150	88
	Fargo Ave. to Flint Ave.	2 Lane	2,500	125	75	0

Street	Segment	Future Geometrics	Future Volume	L_{den} 60 @ ft.	L_{den} 65 @ ft.	L_{den} 70 @ ft.
12th Ave.	Houston to Hanford-Armona Rd.	4 Lane	6,100	156	88	0
	Hanford Armona to SH 198	4 Lane	17,100	280	165	100
	SH 198 to Mall Dr.	6 Lane	30,000	475	283	150
	Mall Dr. to Lacey Blvd.	6 Lane	27,800	475	283	150
	Lacey Blvd. To Greenfield	6 Lane	25,000	475	283	150
	Blvd.	6 Lane	20,700	138	200	113
	Greenfield to Grangeville					
	Grangeville Blvd. To Fargo	4 Lane	8,500	280	165	100
	Fargo Ave. to Flint Ave.	2 Lane	3,100	125	75	0
Campus/ University	Sixth St. to Greenfield Ave.	2 Lane	5,800	250	150	88
	Greenfield Ave. to Grangeville Blvd.	2 Lane	6,000	250	150	88
Greenfield Ave.	Lacey Blvd. To 12th Ave.	2 Lane	11,200	275	150	90
	12th Ave. to Centennial	2 Lane	8,600	275	150	90
11th Ave.	Houston Ave. to Hanford-Armona Rd.	4 Lane	4,800	156	88	0
	Hanford-Armona Rd. to SH 198	6 Lane	18,300	138	200	113
	SH 198 to Lacey Blvd.	6 Lane	20,700	138	200	113
	Lacey Blvd. To Grangeville	6 Lane	14,700	138	200	113
	Grangeville Blvd. to Fargo	4 Lane	15,400	280	165	100
	Fargo Ave. to Flint Ave.	2 Lane	4,500	250	150	88
10th Ave.	Hanford-Armona to SH 198	4 Lane	5,200	125	63	25
	SH 198 to Lacey Blvd.	6 Lane	23,900	138	200	113
	Lacey Blvd. to Grangeville	4 Lane	25,100	388	230	112
	Grangeville Blvd. to Fargo Ave.	4 Lane	22,300	288	230	112
	Fargo Ave. to Flint Ave.	4 Lane	13,300	280	165	100
9th Ave.	Lacey Blvd. to Grangeville	6 Lane	11,500	138	200	113
	Grangeville Blvd. to Fargo	4 Lane	3,550	156	88	0
SH 43	SH 198 to Lacey Blvd.	4 Lane	19,700	350	212	125
	Lacey Blvd. to Grangeville	4 Lane	18,900	350	212	125
	Grangeville Blvd. to Fargo	4 Lane	15,600	280	165	100
	Fargo Ave. to 10th Ave.	4 Lane	10,000	280	165	100
	10th Ave. to Flint Ave.	4 Lane	19,200	350	212	125

Hanford Airport Noise

The Hanford Airport Master Plan forecasts aircraft related noise to the year 2011. The Kings County Airport Land Use Compatibility Plan contains policies that restrict the types of land uses, which are within areas of influence of the airport. Most of these policies have been included in the Hazards Management Element of the proposed General Plan. The 2011 noise contours are shown in Figure 4.11- 4.

Raceway Noise

A major source of noise within the City of Hanford is the raceway at the Kings County Fairgrounds. The raceway is located on the northeast corner of 10th Avenue and

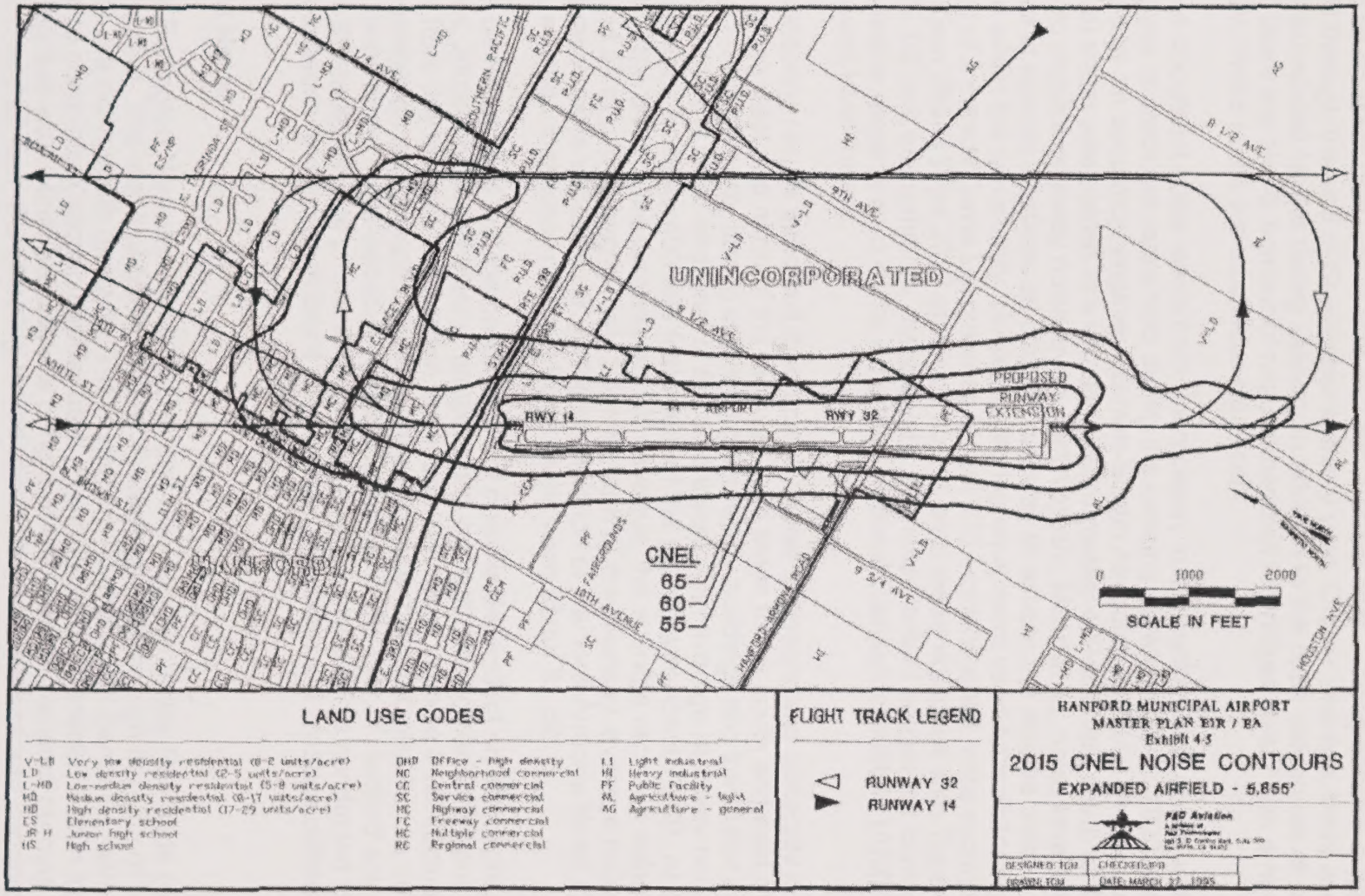


Figure 4.11 –4 –Airport Noise Contours

Hanford-Armona Road. The main vehicle types used for racing at the raceway are categorized as stock cars, sprint cars and IMCA street cars. Racing season is typically from April through the end of September of every year. On the average, there are about 17 races scheduled for the racing season. In addition to the main categories of racing vehicles, there are also a number of races scheduled for midget cars. From a noise standpoint, these races are much less significant.

In order to document noise levels from the raceway in the surrounding community, A noise survey of stock car races held during the evening of November 6, 1993 was conducted by an acoustical engineer (Brown-Buntin Associates (BBA)). A reference noise level meter was placed at a location approximately 400-500 feet south of the raceway to monitor raceway noise levels continuously. Meanwhile, noise levels were measured at several locations around the raceway to assess the relative noise exposure within the community. Noise monitoring equipment used for monitoring consisted of a Larson Davis Laboratories Model 820 environmental noise monitor and a Bruel & Kjaer (B&K) Type 2230 precision sound level meter equipped with Types 4176 and 4155 1/2 inch microphones, respectively. All measurement equipment complied with applicable requirements of the American National Standards Institute (ANSI) for Type I sound level meters.

Noise monitoring results indicated that raceway noise exposure was generally much lower in areas west and north of the raceway than areas to the south and east of the raceway. This is primarily due to shielding provided by buildings and spectator stands for the areas to the north and west of the race tracks. The average raceway noise levels at the reference location (400-500 feet south of the tracks) was about 72 dB. At a similar distance to the west of the raceway on 10th Avenue, the average raceway noise levels were about 57 dB. At approximately 1/4 mile north of the raceway, average noise levels from the races were about 48 dB. At the intersection of Hanford-Armona Road and 9th Avenue, average measured raceway noise levels were about 51 dB.

It should be recognized that the propagation of noise is dependent on atmospheric conditions. Atmospheric turbulence, temperature, humidity, and other conditions, which changes from day to night and season to season, will result in noise level fluctuations. This phenomenon is most apparent at distances greater than 100 feet from a noise source. Since many noise-sensitive receiver locations in the City of Hanford are 100 feet from the raceway, it is probable that noise level measurements conducted in different seasons and under different atmospheric conditions will produce different results.

Railroad Noise

Both the Burlington Northern and Santa Fe and San Joaquin Valley Railroads (SJVR) serve Hanford. The mainline of the BN&SF Railway passes through the City of Hanford generally in a north-south direction. The Burlington Northern and Santa Fe railroad is planning to complete a second parallel track through Hanford generally within its existing right-of-way. Minor acquisitions of right-of-way may be required ranging between 5 and 20 feet. Constructing the additional track is necessary to improve operations through Hanford by improving the ability of trains to pass one another. Over time, it is expected that the number of trains using the system will increase as demand for rail service increases. The BN&SF railroad currently operates between 40 and 50

trains per day on the system. Approximately 30 percent of the freight train movements occur during the nighttime hours (10:00 p.m.- 7:00 a.m.). There is presently one passenger train (AMTRAK) operation that occurs during the nighttime hours.

SJVR's current schedule is limited to one train per day. SJVR and is planning improvements to it's trackage between Goshen and the City of Huron. Existing trackage is in relatively poor condition and upgrades are necessary to meet projected demands for east/west transportation. Development of new industry along the SJVR right-of-way has prompted renewed investment in the east/west service. SJVR anticipates an increase to 3 round trips per week and in the speed of trains using this route. For the purposes of this EIR the BN & SF railroad will be evaluated as the "worst case" potential for railroad noise. The policies for the General Plan have been developed with the most severe noise impacts from the railroads.

The BN&SF railroad tracks within the City of Hanford are of varying elevations relative to surrounding areas. During a field inspection conducted by HBA on October 4, 1993, it was noted that the railbed is generally elevated by about one to seven feet above ground level. There are also several grade crossings along the railroad mainline where warning horns are used by trains. In addition, train speeds vary from location to location within the City. Generally, speeds can be categorized as 45-50 mph from the north City boundary to State Highway 198 and 55-60 mph from State Highway 198 to the south City boundary. However, changes in train speeds does not significantly affect railroad noise levels.

To document railroad noise exposure within different areas of the City, the above data were used in conjunction with railroad noise levels obtained by BBA during past studies conducted in the Hanford area. Noise levels from train passby's as defined by the South Exposure level (SEL) at approximately 175 feet from the tracks, without the use of horn, range from approximately 89-97 dB with a mean of 92.8 dB for freights and 82-87 dB with a mean of 85.3 dB for passenger trains. BBA's experience has shown that in areas within a distance of 1,000 feet from a grade crossing where warning horns are used railroad noise levels increase by about five dB.

Railroad noise exposure may be quantified in terms of using the following formula:

$$+SEL + \text{Log } N_{eq} - 49.4$$

where,

SEL is the average SEL for a train passby,

N_{eq} is the equivalent number of passby's in a typical 24-hour period determined by adding 10 times the number of nighttime events (10:00p.m. - 7:00 a.m.) to the actual number of daytime events (7:00 a.m. - 10:00 p.m.), and 49.4 is a time constant equal to 10 log the number of seconds in the day.

Using the above described railroad noise levels and operational data, the distances from tracks to the 65 dB L_{dn} contours were calculated for existing and future conditions. Calculated distances are summarized in Table 4.11- 4.

From Table 4.11- 4 it is apparent that in areas within the City of Hanford which are away from railroad grade crossing (+1 000 feet), a minimum setback of 140 feet would be required for new noise-sensitive development to comply with future railroad noise exposure of 65 dB L_{dn}. A minimum setback of 300 feet would be required in areas near grade crossings. Development of noise-sensitive uses within these setbacks would require mitigation in the form of a noise barrier.

To determine the minimum setback from the railroad for noise-sensitive land uses with a noise barrier in place, the assumption was made that the barrier would be located along the railroad right-of-way line. Table 4.11- 5 summarizes the minimum setbacks from railroad tracks assuming barriers that are 6 or 8 feet high. It should be noted that the exact setback from the railroad depends on several other factors that are only evident when site-specific projects are proposed. Therefore, the setbacks in Table 4.11- 4 should be viewed as estimations, and not be used for design purposes. Table 4.11- 5 shows the barriers that 6 or 8 feet high can reduce the required setback for the railroad tracks.

Table 4.11- 4

Estimated Setback (Feet) From Railroad Tracks to Comply with 65 dB L_{dn} Standard (Without Barriers)

Contour Values	**Existing (1993)**		**Future**	
	w/o Horn	w/Horn	w/o Horn	w/Horn
65 dB	115'	248'	140'	300'

Source: Brown-Buntin Associates, Inc.

Table 4.11- 5

Estimated Setback (Feet) From Railroad Tracks to Comply with 65 dB L_{dn} Standard-Future Conditions (With Barriers)

Railroad Elevation (above Ground)	**6-foot Barrier**		**8-foot Barrier**	
	Without Horn Noise	**With Horn Noise**	**Without Horn Noise**	**With Horn Noise**
0'-2'	75'	105'	75'	85'
3'-5'	75'	110'	75'	100'
6'-7'	75'	125'	75'	105'

Source: Brown-Buntin Associates, Inc.

School and Recreation Facilities

Several existing and planned schools and recreation facilities conduct evening and nighttime events including football, baseball, and soccer events that may include public address systems and crowd noise. These events are occasional and are considered part of the urban setting. Nevertheless the events will generate complaints if they are

conducted into the late evening past 10 p.m. Newer planned facilities such as the New Hanford High School and Learning Center may combine school and City recreation facilities. Noise from those activities is expected to occasionally in the evening hours similar to other school and recreation facilities in the City.

4.11.2.d Mitigation Measures

No mitigation measures are required beyond the Policies and Programs contained in the General Plan. The General Plan Land Use Element, Hazards Management Element, Open Space/Conservation, and Recreation Element contains a number of Policies and Programs which help mitigate impacts associated with implementation of the General Plan. These policies and programs generally relate to the installation of noise attenuation walls, setbacks from noise sources, noise studies for sensitive uses in predicted high noise locations, and noise standards for sensitive uses. Specifically Policy LU 7.2; Policy LU 8.1, Programs LU 8.1-A & B; Policy LU 8.3; Policy LU 14.1; Policy CI 9.1; Policy CI 9.3, Programs CI 9.3 - A & B; Objective CI 11; Policy CI 11.1, Program CI 11.1 – A; Objective HZ 4; Policy HZ 4.1, Program HZ 4.1-A; Objective HZ 6; Policy HZ 6.1; Policy HZ 6.2, Program HZ 6.2 – A; Policy HZ 6.3; Policy HZ 6.4; Policy HZ 6.5; Policy HZ 6.6; Policy HZ 6.7; Policy HZ 6.8; Policy HZ 6.9; Policy HZ 6.10; and Policy HZ 6.11, Objective OCR 16; Policy OCR 16.1, Program OCR 16.1 – A.

Level of Significance After Mitigation

Less than Significant

Mitigation Implementation and Monitoring Responsibility

Implementation: The City of Hanford Community Development Department through the Site Plan Review Committee shall be responsible for the implementation of the mitigation measures through the Building Permit, Site Plan Review, and/or subdivision review process.

Monitoring: The various implementing departments of the City of Hanford are responsible for administering the City's Site Plan Review and Subdivision Ordinance processes. An application for a Certificate of Occupancy is required prior to completing a project. The conditions of approval are checked prior to issuing a Certificate of Occupancy.

4.12. POPULATION/HOUSING/EMPLOYMENT

4.12.1. Environmental Setting

The City of Hanford is the largest of three cities in Kings County. Over the 1990 – 2000 period, Hanford's population increased by almost 10,789, from 30,897 to 41,681. Hanford's current population is estimated at 44,111. Very few persons were added as a result of populated annexations to the City since 1993. The population of Kings County is estimated at 136,107.

Based on statistical information available from the 2000 Census and State Department of Finance, Table 4.12- 1 presents basic population, housing, and employment information.

Table 4.12- 1

Hanford Population and Housing Characteristics Year 2000

Total Population	41,686	
Male	20,411	49%
Female	21,275	51%
Age Groups		
Less than 5 years	3,636	8.8%
5 to 19 years	10,788	26.0%
20 to 64 years	22,691	54.8%
Older than 65 years	4,301	10.4%
Ethnicity		
White	20,794	50.2%
Hispanic	16,116	38.9%
Black or African American	2,090	5.0%
Asian	1,190	2.9%
American Indian	569	1.4%
Other	657	1.6%
Housing		
Total Units	14,721	
Occupied	13,931	
Vacant	790	5.4%
Owner Occupied	8,213	59%
Renter Occupied	5,718	41%
Average Household Size		
Owner Occupied	2.96	
Renter Occupied	2,89	

The complete tabulated results of 2000 census for population, housing, and employment are not yet available to the City of Hanford. Apparently, some adjustments

are still being made to California 2000 census tabulations. It is anticipated that by the middle of 2002 the results will be available. The City will be in the process of updating its General Plan Housing Element in the latter part of 2002 and it should contain current 2000 census information.

Population Forecast

The 1994 General Plan relied on growth data available for the preceding 10 years. Those growth assumptions were fairly accurate in predicting the City's population in 2001. This General Plan Update is based on growth assumptions that reflect the City's past growth patterns since 1994. In the last 7 years (1994-2001) the City's annual growth rate is about 2.7 percent. This rate is generally consistent with the forecast of 2.8% used in the 1994 General Plan. The rate of growth between 1990 and 2001 was about 3.0%, however annexations of populated areas inflated the growth rate. Although future annexations of populated areas may occur, real growth should continue to average around 2.8%. In all of the growth projections, there was sufficient land within the Planning Area Limits to accommodate expansion.

The historical growth figure of 2.8 percent was used to provide a starting point to the plan. Expansion of Lemoore Naval Air Station may provide a significant change in the short-term growth pattern, but will likely be absorbed within the overall growth pattern.

Table 4.12- 2presents a projected population growth to the year 2025 based on a number of assumptions, including an average estimated 2.8% growth rate per year.

Table 4.12- 2

Population Forecast to 2020

Year	Population	Cumulative
2002	43,575	N/A
2005	47,339	3,764
2010	54,348	10,773
2020	71,633	28,058
2025	82,239	38,664

Employment Base

The City of Hanford's employment base can be viewed from two perspectives. Jobs existing in the City, and the employment of persons residing in the City. It is estimated that there are 10,200 jobs in the City. As with all communities, not all the jobs existing in a city are filled by persons residing in the city. The 1990 Census indicates that 56 percent of jobs are held by persons residing in the community. Of the employed persons who reside in Hanford, 44 percent commute elsewhere for employment. According to

the 1990 census the mean travel time to place of work was 18 minutes, and 36 percent of the City's residents commuted more than 20 minutes to their place of employment. Of those who commuted, most commuted between 20 and 35 minutes, with the highest number commuting between 30 and 35 minutes.

The Kings County Economic Development Corporation provides employer data to the public. Table 4.12- 3 presents the largest non government employers within the Planning Area based on that information.

Table 4.12- 3

Major Non Government Employers in the Planning Area

Employer	Number of Employees
Gilroy Foods	290
Calcot Ltd.	50
Central Meat Company	200
Del Monte Food	1,200
Granite Construction Company	400
Helena Chemical Co.	100
International Paper	120
Exopack	250
Marquez Brothers	150
Mclellan Industries	90
Netto Ag, Inc.	65
Penny Newman Milling	60
The Hanford Sentinel	100

According to the Kings County Economic Development Commission, in 1999 the majority of Kings County residents held jobs in government related industries. The presence of the Lemoore Naval Air Station accounts for a significant number of those jobs. Agriculture accounts for 20% of the employment followed by the service industry with 15%. According to the 1990 Census in Hanford the most prevalent occupation was the professional and health sector (41.7%), followed closely by retail (19%), then manufacturing (11.8%), with agriculture at 8.9 percent. The type of jobs most Hanford residents held was administrative and support staff (20%), followed by executive positions (17.6%), and sales at 12.9%. Military employment in Hanford is relatively low accounting for only 3 percent of total employment for persons in the labor force. Lemoore Naval Air Station has expanded as a result of the base closures authorized by the Department of Defense. The 2000 Census may show a higher percentage of employment connected with the Air Station. It is generally accepted that the "trickle down" effect of new Air Station jobs is about 2:1. Trickle down jobs would be in the retail trade as commercial enterprises expand to serve the new population. Construction trades associated with new construction, building supply, and service industries would

also be effected.

Employment Locations and Housing

One of the largest non government employment sectors in the County is agriculture. The largest employers in the City relate almost entirely to agricultural production, packaging, and processing demonstrate this. Housing for agricultural related employees is not only significant because of the large numbers of permanent and seasonal employees which combined make it the largest non government employment sector, but because the seasonal influx of migrant workers creates a great demand for temporary housing. Most of the activities are seasonal with the highest employee demand starting in early summer and increasing into early fall when crops are harvested.

Current Jobs/Housing Balance

The economy of Hanford, like Kings County, is based on agriculture. Hanford as the County seat also serves a regional commercial hub.

With the increased mechanization of agricultural practices, the need for large numbers of farm workers is expected to diminish over time. However, long range agricultural water strategies retain the objective of sustaining agricultural operations in the San Joaquin Valley. As cities grow, agricultural water is transferred to existing or developing agricultural areas to replace potential crop loss from urbanization.

It is estimated that the City of Hanford has about 10,200 jobs and a household count of approximately 13,390 units. The estimated current housing to job ratio is approximately 1 household to .76 jobs. This ratio is generally consistent with the overall County unemployment rate of about 13%.

4.12.2. Environmental Analysis

4.12.2.a Methodology

The balance between population and employment is typically measured in two ways. The simplest measure is a ratio of employed residents to jobs, with 1:1 ratio indicating a perfect balance between the two variables. In general, the analysis is based on a review of the methodologies and assumptions used to develop the Draft General Plan population and employment growth projections. These projections are then compared to the proposed changes in the existing land use designations as contained in the Draft General Plan.

Employment was based on the build-out of the commercial, office, and industrial uses as described in the General Plan. The number of employees per 1,000 square foot of floor area anticipated was taken from traffic studies contained in the San Diego Council of Governments Traffic Generators for various sizes and intensities of businesses. Adjustments were made for gross area to reflect typical floor area ratios and development intensities. These adjustments ranged from 9% to 25% of total land use area forecasted at build-out as covered by building space.

4.12.2.b Thresholds of Significance

In accordance with the State *CEQA Guidelines*, a project will normally have a significant impact on housing if it will affect the existing supply of housing or create a demand for more housing. For the purpose of this EIR, the Draft General Plan is considered to have a significant impact if adoption or implementation of the plan would:

1. Create a demand for more housing without providing for accompanying housing development;

2. Be inconsistent with the City's Housing Element; or

3. Substantially alter the location, distribution, density or growth of the population of an area.

4.12.2.c Impacts

Development at target intensity/density could result in a total of over 35,700 dwelling units in the Planning Area. Development of non-residential uses using typical FAR's is estimated to be in the magnitude of approximately 47.6 million square feet within the Planning Area. Based on the available square feet by type of business and estimated number of employees per 1,000 sq.ft., approximately 37,600 jobs would be present within the Planning Area. The employment level, based on jobs per dwelling is expected to increase from the current estimated level 0.76 jobs per dwelling, to 1.05 jobs per dwelling. This impact is predicated on Hanford's intent to aggressively pursue industrial development in the Kings Industrial Park, and the expansion of commercial areas to serve residential growth projected for Hanford. A housing ratio of 1:1 is desirable as a sustainable community. This is considered a less than significant impact.

The expected new housing development to accommodate an estimated population of 101,189 at ultimate build-out beyond the year 2032 is shown in Table 4.12- 4 and is contrasted with the anticipated growth in employment within the City in the same time frame. The growth in jobs is estimated based on the current ratio of developed industrial land to residential units, and commercial, office, and similar uses is based on a ratio of about 10% commercial acreage to residential acreage developed.

While there may continue a trend toward commuter households (Lemoore NAS, Fresno, and Visalia), the local demands for services for those households will continue and produce jobs.

Table 4.12- 4

Population, Housing, Employment General Plan Impacts

Land Use	Density Range[1] / FAR[2]	Gross Acres	Net[3] Acres	Dus[4]/sq.Ft	H.H. Size/ sq.ft/ Job	Pop.	Jobs	% of Total
RESIDENTIAL								
Agriculture (1 DU/2OAC)	1 DU/20 AC	2,704	2,623	131	2.84	373	131	0.35%
Very Low (2 DU/AC)	0-3 DU/AC	1,442	1,103	2,207	2.84	6,267		
Low (5 DU/AC)	2-9 DU/AC	5,901	4,514	22,571	2.84	64,102		
Medium (12 DU/AC)	7-15 DU/AC	902	767	9,200	2.84	26,128		
High(15 DU/AC)	10-22 DU/AC	135	115	1,728	2.50	4,319		
Subtotal		8,381	6,499	35,706		101,189	131	0.35%
NON-RESIDENTIAL								
Commercial	.25-2.0 FAR	1,887	925	16,113,723	1.1		17,725	47.12%
Office	.25-.75 FAR	375	141	2,451,855	1.25		3,065	8.15%
Industrial	.25-1.0 FAR	3,543	1,860	20,254,384	0.5		10,127	26.92%
Public Facilities	.1-1.0 FAR	1,784	1,338	8,744,449	0.75		6,558	17.44%
Parks/Open Space	.01-.15 FAR	224	213	9,279	1		9	0.02%
Subtotal		7,814	4,477	47,573,690			37,485	99.65%
TOTAL		18,899	13,599			101,189	37,616	100%

1. Densities reflect an average gross density based on the permitted range of dwelling unit per acre for each category.

2. Building intensities are expressed in Floor Area Ratio (FAR) which is the ratio of the building area to the total area of the parcel on which it stands. Residential density is expressed in dwelling Units per gross acre (U/AC). Gross acres include land that must be removed for local streets, parks, collector and arterial reads, and infrastructure.

3. Net acres reflect the removal of land for local parks, local, collector and arterial streets, infrastructure, and a reserve of vacant land to maintain internal development competitiveness.

4. Non-residential square footage is determined by multiplying the net acres by the appropriate estimated average FAR.

Implementation of the General Plan would result in increased population, additional dwelling units and employment opportunities. The estimated increases in population and dwelling units are within Kings County growth projections for the region, and therefore, do not represent significant environmental impacts. However, population and housing increases would have indirect impacts on traffic, noise, air quality, and agricultural land. Discussion of these impacts are provided in various sections of the EIR. The increase in employment is perceived as beneficial.

4.12.2.d Mitigation Measures

The General Plan Land Use Element and Housing Element contains as follows: Objective LU 9, Objective LU 11, Objective LU 14, Objective LU 15, Objective LU 17, Objective LU 20, Objective LU 22, Objective LU 23, Objective LU 28, Policy LU 28.1, Program LU 28.1-A, Policy LU 28.2, Policy LU 28.3; which help avoid adverse impacts associated with population and housing associated with implementing the Plan.

Level of Significance After Mitigation

Less than Significant.

Mitigation Implementation and Monitoring Responsibility

Implementation: The City of Hanford Community Development Department through the Annexation, Subdivision Map, and project review processes shall be responsible for recommending findings of consistency with the General Plan. The Hanford Planning Commission and City Council are responsible for adopting such findings of consistency prior to project approval.

Monitoring: The various implementing departments of the City of Hanford are responsible for administering the City's Site Plan Review and Subdivision Ordinance processes. An application for a Certificate of Occupancy is required prior to completing a project. The conditions of approval are checked prior to issuing a Certificate of Occupancy.

4.13. PUBLIC SERVICES

Introduction

This Section of the EIR is organized somewhat differently than previous Sections. Because this Section addresses distinct services in the City, each of the topics will be organized by "environmental setting", impacts and mitigation measures. The methodology and thresholds of significance will be stated in the beginning of the Section as opposed to prior to the impacts and mitigation measures. The advantage of this organization is that topical discussions will be kept together.

4.13.1. Methodology

Each of the topical areas of discussion was inventoried by collecting data from available published sources or by interviews with City Department heads. Where the General Plan established standards for service, they were used to compare and contrast the existing level of service within the City and the forecasted level of service at General Plan build-out. The General Plan typically establishes level of service for various services or requires public services to be available to new development. Where services are not delivered by the City, such as schools, the impacts are discussed within the limitations of statutory mitigation limitations.

4.13.2. Thresholds of Significance

Would the project result in a substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

Fire protection?

Police protection?

Schools?

Parks?

Other public facilities?

4.13.3. Fire Services

4.13.3.a Environmental Setting

Generally, Hanford is free from major wildland fire hazards. Among the important issues with regard to fire safety and suppression is the placement of fire stations within a reasonable response to urban uses in the City. Accompanying the adequate equipment and strategic location of fire stations, is the need to provide for adequate fire flow in

water systems (including fire hydrants) and adequate standards for roadway access to serve fire equipment. Other issues relate to transportation and storage of hazardous or potentially hazardous materials. This is particularly important with the consistency required between the City's Capital Improvement Program and the General Plan where new or expanded public facilities are programmed.

Personnel and Future Demand

The Hanford Fire Department currently operates with full staff and volunteers. Fire Dispatch is handled through the Hanford Police Department.

The number and kind of vehicles available to the Fire Department will substantially depend on the type of development occurring in the City. An additional factor is the age of current equipment and the need to replace this older equipment with modern fire fighting apparatus. Additional fire fighting equipment will be required as urban growth demands new fire stations to be constructed.

Service Locations and Future Demand

The City of Hanford is currently served by two fire stations. Station No.1 is a 10,000 sq.ft. facility located at 350 W. Grangeville Blvd. Station No.2 is a 4,500 sq.ft. facility located at 10553 Houston Avenue. Station service areas are designed to allow for an approximate 5 minute response time which is the acceptable standard for the City of Hanford. Most of the existing City falls within the 5 minute response time contour from the current stations. Growth of the City to the east or west will begin to place more development outside the acceptable response time contours. Based on population and area of growth considered by the Land Use Map, two additional fire stations are needed to maintain acceptable standards. Fire Stations are planned at 7th Street and Campus Drive and at 9th Avenue and Florinda.

Kings County is constructing a new fire station east of Highway 43 between Hanford Armona Road and Houston Avenue.

Community Programs

Fire safety education programs consist primarily of a school fire safety program, spring clean-up, fire prevention week activities, earthquake safety, burn awareness, poison control, and commercial kitchen safety.

An annual fire safety program is provided for school children (kindergarten through sixth grade) and a preschool program is available upon request. Tours of fire stations are also conducted for school children.

During fire prevention week, fire safety education programs and displays are provided for the general public and to all Hanford Elementary Schools.

Project Development Review

The Planning Department refers appropriate project applications to the Fire Department for review and comment. This review includes topics such as access, alarm systems, need for on-site suppression systems (sprinklers), addressing locations, hydrant location, etc. Comments and recommendations of the HPD are forwarded to the Planning Department for inclusion as development conditions.

Service to Unincorporated Areas

The Kings County Fire Department provides services to the unincorporated area surrounding the City. Given the level of urban development and the uncertainty of boundaries near the City limits, a joint response including City Fire Department is typical. Actual responsibility is determined at the scene.

4.13.3.b Impact

Growth of the City to the east or west consistent with the proposed General Plan will begin to place more development outside the acceptable response time contours. Based on population and area of growth considered by the Land Use Map, two additional fire stations are needed to maintain acceptable standards. One future station should be located near 12th Avenue south of Highway 198, and a second station should be located near East Lacey Boulevard north of Highway 198. This is a potentially significant impact.

4.13.3.c Mitigation Measures

The General Plan provides policies and programs, which adequately mitigate any potentially significant environmental impacts associated with implementation of the proposed General Plan. The General Plan contains policies and programs to provide for the expansion of fire services, specifically Policy LU 1.1, Program LU 1.1-A, B & C; Objective HZ 3, Policy HZ 3.1, Programs HZ 3.1-A through E, Policy HZ 3.2, Program HZ 3.2 -D, Policy HZ 3.4, Program HZ 3.4 (A); Policy PF 9.3, Program PF 3.9-A.

Level of Significance After Mitigation

Less than Significant

Mitigation Implementation and Monitoring Responsibility

Implementation: The City of Hanford Community Development Department through the Annexation, Subdivision Map, and project review processes shall be responsible for recommending findings of consistency with the General Plan. The Hanford Fire Department participates in the review and recommendation of proposed projects. The Hanford Planning Commission and City Council are responsible for adopting such findings of consistency prior to project approval. The City Council is responsible for the City budgets and assigning development impact fees to provide for the expansion of personnel, acquisition of new equipment and facilities for the Fire Department.

Monitoring: The various implementing departments of the City of Hanford are responsible for administering the City's Site Plan Review and Subdivision Ordinance

processes. An application for a Certificate of Occupancy is required prior to completing a project. The conditions of approval are checked prior to issuing a Certificate of Occupancy. The City Council as the legislative body of the City prepares annual budgets at which time programs can be included to expand Fire Department facilities and operations.

4.13.4. Police Services

4.13.4.a Environmental Setting

The Hanford Police Department (HPD) currently operates out of a single station located at 425 Irwin Street. This facility, while adequate for current programs and community demands, offers little room for expansion to meet increasing needs of the police services. Including Reserve Officers, the ratio of sworn officers per 1,000 population is approximately 1.12 (39 sworn officers), which is within the desired service level range of the Police Department. The Police Department dispatches both for police and fire services.

The Hanford Police Department (HPD) currently operates out of a single station located at 425 North Irwin Street. This facility, while adequate for current programs and community demands, offers little room for expansion to meet increasing needs of the police services. As growth continues in Hanford, additional sworn officers and support staff will be required. Expanding personnel requires significant capital investment for equipment such as vehicles, law enforcement supplies, and office space. As growth continues in Hanford, the desired level -of-service of 1.1 sworn officers per 1,000 population should be maintained. In addition to sworn officers, additional support staffing will be required. Expanding personnel requires significant capital investment for equipment such as vehicles, law enforcement supplies, and office space.

The Police Department dispatches both for police and fire services.

Community Programs

The HPD currently provides two educational programs for the Hanford elementary School District. Each fall, the Stop On A Dime program provides education and safety awareness to elementary school students regarding traffic safety. Another elementary school program, Drug Abuse Resistance Education (DARE), is aimed at reducing and avoiding drug abuse problems at an early age. The DARE program is co-funded by the Hanford Elementary School District and the HPD. The HPD would like to expand the DARE program to include high school students as part of developing a School Resource Officer program.

Development Project Review

The Planning Department refers appropriate project applications to the Police Department for review and comment. This review includes topics such as lighting, alarm systems, and access. Comments and recommendations of the HPD are forwarded to the Planning Department for inclusion as development conditions.

Service to Unincorporated Areas

The Kings County Sheriffs Department is responsible for law enforcement within the unincorporated areas surrounding the City of Hanford. In the event that the Sheriff's Department requires assistance or is unable to respond, the

HPD will dispatch officers as needed, per request of the Sheriff's Department watch supervisor. The Sheriff's Department has full law enforcement authority in the unincorporated areas of Kings County, and the California Highway Patrol has full traffic enforcement responsibility in unincorporated areas of the County.

4.13.4.b Impact

Growth of the City to the east or west consistent with the proposed General Plan will require addition police officers to maintain the desired ratio of 1.1 officers per 1,000 population. In addition to the personnel, new equipment will have to be added, as well as potentially more facility space for police operations. This is a potentially significant impact.

4.13.4.c Mitigation Measures

The General Plan provides policies and programs, which adequately mitigate any potentially significant environmental impacts associated with implementation of the proposed General Plan. The General Plan provides policies and programs, which adequately mitigate any potentially significant environmental impacts associated with implementation of the proposed General Plan. The General Plan contains policies and programs to provide for the expansion of Police Department services, specifically Policy LU 1.1, Program LU 1.1-A, B & C; Policy HZ 3.4, Program HZ 3.4 (B); Policy PF 9.3.

Level of Significance After Mitigation

Less than Significant

Mitigation Implementation and Monitoring Responsibility

Implementation: The City of Hanford Community Development Department through the Annexation, Subdivision Map, and project review processes shall be responsible for recommending findings of consistency with the General Plan. The Hanford Planning Commission and City Council are responsible for adopting such findings of consistency prior to project approval. The City Council is responsible for the City budgets and assigning development impact fees to provide for the expansion of personnel, acquisition of new equipment and facilities for law enforcement programs.

Monitoring: The various implementing departments of the City of Hanford are responsible for administering the City's Site Plan Review and Subdivision Ordinance processes. An application for a Certificate of Occupancy is required prior to completing a project. The conditions of approval are checked prior to issuing a Certificate of Occupancy. The City Council as the legislative body of the City prepares annual

budgets at which time programs can be included to expand police department facilities and operations.

4.13.5. Hanford Airport

4.13.5.a Environmental Setting

The Hanford Airport Master Plan addresses a 20 year time frame. The plan forecasts a growth in aircraft activity from a 1991 level of about 35,000 operations to over 63,000 by the year 2011. The number of fixed base operators are expected to increase from 64 to over 105 in the same time frame. The City has completed a runway extension to a length of 5,855 feet. The General Plan encourages the use of appropriately located land at the Airport for light industrial, service commercial, and airport oriented businesses. The City has acquired additional land around the southern approach to the runway to provide for a substantial clear zone and prevent any urban uses.

4.13.5.b Impacts

The Hanford Airport Plan implements expansion of the airport in anticipation of growth within the community and the need for expanded facilities. The impact of growth has been anticipated and the impact from implementation of the General Plan is less than significant.

4.13.5.c Mitigation Measures

The General Plan contains policies and programs to provide for the expansion of the Hanford Airport, specifically policy HZ 4.1, programs HZ 4.1(A) and (B), policy HZ 4.2, program HZ 4.2 (A).

The General Plan provides policies and programs, which adequately mitigate any potentially significant environmental impact associated with implementation of the proposed General Plan.

Level of Significance After Mitigation

Less than Significant

Mitigation Implementation and Monitoring Responsibility

Implementation: The City of Hanford Community Development Department through the Annexation, Subdivision Map, and project review processes shall be responsible for recommending findings of consistency with the General Plan. The Hanford Planning Commission and City Council are responsible for adopting such findings of consistency prior to project approval.

Monitoring: The various implementing departments of the City of Hanford are responsible for administering the City's Site Plan Review and Subdivision Ordinance processes. An application for a Certificate of Occupancy is required prior to completing a project. The conditions of approval are checked prior to issuing a Certificate of Occupancy.

4.13.6. Schools

4.13.6.a Environmental Setting

The City of Hanford and its Planning Area is served by six elementary school districts and one high school district.

Armona Union Elementary School District

Armona Union Elementary School District operates two schools: Armona Elementary (Kindergarten through 4th grade) and Parkview Middle School (5th through 8th grade). Enrollment for the district is shown in Table 4.13- 1.

Table 4.13- 1

Armona Union Elementary School District

Year	95/96	96/97	97/98	98/99	99/00
Enrollment	940	968	975	957	944
Growth Rate 0%					

Source: State of California Department of Education, Ed Data, 2002

The District has experienced both increases and decreases over the past five years according to enrollment information. The net growth over the period is 0%.

The district uses the State of California standards for class size (teacher/student ratio).

Hanford Elementary School District

The Hanford District operates nine schools serving the City of Hanford and surrounding area. Enrollment figures for the last several years are shown in Table 4.13- 2. The figures show a generally increasing enrollment during the past several years averaging less than 1 percent annually.

Table 4.13- 2

Hanford Elementary School District Enrollment

Year	95/96	96/97	97/98	98/99	99/00
Enrollment	4,884	5,014	5,045	5,079	5,045
Growth Rate 0.8%					

Source: State of California Department of Education, Ed Data, 2002

Current enrollment rates and average class size for the District's individual schools is shown in Table 4.13- 3. This Table also indicates which of the District's school facilities have converted to year-round schedules to alleviate overcrowding.

Table 4.13- 3

Student Enrollment Hanford Elementary Schools

School	Grades	99/00 Enrollment	Year-Round
Roosevelt	K-6	478	No
Washington	K-6	671	No
Jefferson	4-6	369	No
Lincoln	K-3	501	No
Monroe	K-6	704	No
Richmond	K-6	573	No
Wilson	7-8	559	No
Kennedy	7-8	517	No
King	K-6	673	No

Source: State of California Department of Education, Ed Data, 2002

The District passed school construction bond in 1993 for $7.5 million and in 1998 for $7.3 million. Two new schools have been added since 1994.

Hanford Joint Union High School District

The Hanford High School District serves the northeast portion of Kings County and includes the area covered by the Armona, Delta View, Hanford, Kings River-Hardwick, Kit Carson, Lakes and Pioneer School Districts. Enrollment for the past five years is shown in Table 4.13- 4. This Table indicates enrollment has been increasing at a rate of over 4.6 percent annually.

The District operates two campuses, East and West, located in Hanford, where the majority of students live. The District is planning a New Hanford High School/Learning Center located near 13th Avenue between Lacey Blvd. and Grangeville Blvd. This facility is planned as a joint facility with Sequoia College and the City of Hanford. School financing bond measures were passed by the District in 1998 in the amount of $18 million.

Table 4.13- 4

Hanford Joint Union High School District Enrollment

Year	95/96	96/97	97/98	98/99	99/00
Enrollment	2,654	3,023	3,196	3,205	3,365
Growth Rate 4.6%%					

Source: State of California Department of Education, Ed Data, 2002

Kings River-Hardwick Union Elementary

Kings River-Hardwick serves the area north of Hanford, including lands within the Hanford City Limits. The District maintains a single school, Kings River-Hardwick Elementary; Kindergarten through 8th grade. Enrollment figures for the District are shown in Table 4.13- 5. These figures reveal that enrollment has been increasing at a rate of 5.2 percent annually.

Table 4.13- 5

Kings River - Hardwick Union Elementary School District Enrollment

Year	95/96	96/97	97/98	98/99	99/00
Enrollment	474	552	540	576	580
Growth Rate 5.2%%					

Source: State of California Department of Education, Ed Data, 2002

Kit Carson Union Elementary School District

Kit Carson District serves a portion of northeast Kings County, including fringe areas in the eastside of Hanford. The District is located between Hanford on the west, and Delta View School District on the east. The district operates a single school, Kit Carson Elementary, located at 7th Avenue, north of Highway 198. Enrollment figures for Kit Carson are shown in Table 4.13- 6. This Table indicates a declining enrollment.

Table 4.13- 6

Kit Carson Union Elementary School District Enrollment

Year	95/96	96/97	97/98	98/99	99/00
Enrollment	436	422	452	412	380
Growth Rate 0%%					

Source: State of California Department of Education, Ed Data, 2002

Lakeside Union Elementary School District

Lakeside Union operates two schools serving the area southeast of Hanford. The schools are Gardenside (K-3) and Lakeside (4-8). Table 4.13- 7 shows enrollment rates for district have been declining.

Table 4.13- 7

Lakeside Union Elementary School District Enrollment

Year	95/96	96/97	97/98	98/99	99/00
Enrollment	518	517	495	499	445
Growth Rate 0%%					

Source: State of California Department of Education, Ed Data, 2002

Pioneer Union Elementary School District

In January 1994, Pioneer Union Elementary District became the first district in California to be granted Charter status. This District serves the area northwest of Hanford including portions of the northwest Hanford fringe area. It includes two schools, Pioneer Elementary (K-3) and Pioneer Middle School (4-8) on a combined campus. The schools share some facilities, including the cafeteria and library. District enrollment is shown in Table 4.13- 8. The Table indicates the District is experiencing growth; averaging about 1.3 percent over the past five years.

Table 4.13- 8

Pioneer Union Elementary School District Enrollment

Year	**97/98**	**98/99**	**99/00**	**00/01**	**01/02**
Year	**95/96**	**96/97**	**97/98**	**98/99**	**99/00**
Enrollment	910	974	958	992	1,041
Growth Rate 1.3%%					

Source: State of California Department of Education, Ed Data, 2002

School Impact Fees

In September 1986, the Governor signed into law Assembly Bill 2926 (Chapter 887/Statutes 1986) which granted school district governing boards the authority to impose developer fees. This authority is codified in Education Code Section 17620 which states in part " the governing board of any school district is authorized to levy a fee, charge, dedication or other form of requirement against any development project for the construction or reconstruction of school facilities."

The maximum fee that can be levied is adjusted every two years according to the inflation rate, as listed by the statewide index for Class B construction set by the State Allocation Board. In January 1992, the State Allocation Board increased the maximum fee to $1.65 per square foot for residential construction and $.27 per square foot for commercial and industrial construction.

Senate Bill 1287 (Chapter 1354/Statutes 1992) effective January 1, 1993, affected the facility mitigation requirements a school district could impose on developers. Senate Bill 1287 allowed school districts to levy an additional $1.00 per square foot of residential construction (Government Code Section 65995.3). The authority to levy the additional $1.00 was rescinded by the failure of Prop. 170 on the November 1993 ballot.

In January 1994 the State Allocation Board's biennial inflation adjustment changed the fee to $1.72 per square foot for residential construction and $.28 per square foot for commercial/industrial construction.

In January 1996 the State Allocation Board's biennial inflation adjustment changed the fee to $1.84 per square foot for residential construction and $.30 per square foot for commercial/industrial construction.

In January 1998 the State Allocation Board's biennial inflation adjustment changed the fee to $1.93 per square foot for residential construction and $.31 per square foot for commercial/industrial construction.

In January 2000 the State Allocation Board's biennial inflation adjustment changed the fee to $2.05 per square foot for residential construction and $.33 per square foot for commercial/industrial construction.

In January 2002 the State Allocation Board's biennial inflation adjustment changed the fee to $2.14 per square foot for residential construction and $.34 per square foot for commercial/industrial construction.

In order to levy a fee, a district must make a finding that the fee to be paid bears a reasonable relationship and be limited to the needs of the community for elementary or high school facilities and be reasonably related to the need for schools caused by the development. Fees are different from taxes and do not require a vote of the electorate. Fees may be used only for specific purposes and there must be a reasonable relationship between the levying of fees and the impact created by development.

Senate Bill 50: Background

In August 1998, the Governor signed into legislation Senate Bill 50, also known as the Leroy Greene School Facilities Act of 1998. This bill made major changes in the State Facilities Program as well as developer fee mitigation for school districts in California. Education Code 17620 was amended to include the provisions of Government Code 65995.

Prior to the passage of SB 50, school districts had been able to rely on a series of appellate court decisions known as "Mira-Hart-Murieta". These court decisions had allowed municipalities, when making a legislative decision (such as general plan amendments, development agreements, zoning changes, etc.) concerning land use, to consider the impacts of that decision on school facilities and condition its approval on mitigation measures. These cases allowed cities and counties to assist school districts by using their legislative power to fully mitigate the impacts of land development on school facilities. These measures could be in the form of higher developer fees, land dedication or other measures which the municipal agencies agreed would mitigate the impacts of the proposed development. In addition, the California Environmental Quality Act (CEQA) was interpreted by the "Mira" decisions to include mitigation for the environmental impact of a development, providing the school districts with another opportunity to benefit from mitigation agreements.

SB 50 imposes new limitations on the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development. This law amends Government Code Section 65995(a) to provide that only those funds authorized by Education Code Section 17620 or Government Code 65970 may be levied or imposed in connection with or made conditions of any legislative or

adjudicative act by a local agency involving planning, use, or development of real property.

SB 50 provides authority for collection of three levels of developer fees:

Level I Fees:

Level I fees are the current statutory fees allowed under Education Code 17620. This code section provides the basic authority for school districts to levy a fee against residential and commercial construction for the purpose of funding school construction or reconstruction of facilities. These fees, which are currently $2.14 for residential construction and $0.34 for commercial construction, will be increased in the year 2004 and every two years thereafter in accordance with the statewide cost index for Class B Construction as determined by the State Allocation Board. The district can collect these fees as long as current justification study justifies those amounts, according to the regulations in Government Code 66001.

Level II Fees:

Level II developer fees are outlined in Government Code Section 65995.5, a new section under SB 50. This code section allows a school district to impose a higher fee on residential construction if certain conditions are met. This level of developer fees is subject to a Facility Needs Analysis based on Government Code Section 65995.6.

Level III Fees:

Level III developer fees are outlined in Government Code Section 65995.7. If State funding becomes unavailable, this code section authorizes a school district who has been approved to collect Level II fees to collect a higher fee on residential construction. This fee is equal to twice the amount of Level II fees. However, if a district eventually receives State funding, this excess fee must be reimbursed to the developers or be subtracted from the amount of State funding.

4.13.6.b Impacts

The Hanford General Plan will have an impact on all of the school districts listed above to differing degrees. The Planning Area is served by these districts based on specific district boundaries. The General Plan indicates that growth is likely in the short-term on the west side of the Planning Area until waste water collection systems can be installed on the east side of the Planning Area. The short-term impacts will substantially effect the Hanford Union Elementary School District, Pioneer Elementary School District, and the Armona School District requiring additional classrooms and new schools. Long-term planned growth will continue to effect all school districts serving the Hanford area.

The following analysis indicates the demand for additional school facilities resulting from build out in the Planning Area to the year 2025. Based on the 1990 Census, a student generation factor of 0.9 students per dwelling unit was used to determine student needs for the Hanford General Plan. According to the population age statistics found in the Census, it was calculated that 50 percent of persons between the ages of 5 and 18

were of elementary school age (5 to 11 years), and 2 percent were junior high school age (12 to 13 years), and 20 percent were of high school age (14 to 17 plus one-third of all 18 year olds). Table 4.13- 9 shows the student generation based on the General Plan build out.

Table 4.13- 9

Population Growth Impacts on School Districts

Dwelling Unit Growth (3 or more rooms)	15,198	Students	Classroom Size	New Classrooms Needed
Student Generation Factor/Unit	0.9			
Elementary School Students	50%	6,376	25	255
Junior High Students	20%	2,551	30	85
High School Students	20%	2,551	32	80
Total Students/Classrooms		11,477		420
School Type	Average Size	No. New Schools		
Elementary School	500	13		
Junior High	750	4		
High School	1,500	2		

4.13.6.c Mitigation Measures

The City will continue to work with local School Districts to comply with the law that requires that school facility impact fees are collected prior to issuing building permits.

State law imposes limitations on the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development. This law amends Government Code Section 65995(a) to provide that only those funds authorized by Education Code Section 17620 or Government Code 65970 may be levied or imposed in connection with or made conditions of any legislative or adjudicative act by a local agency involving planning, use, or development of real property. The impact to the School Districts must be considered a less than significant impact.

Level of Significance After Mitigation

Less than Significant

Mitigation Implementation and Monitoring Responsibility

***Implementation**:* School Districts have the authority to collect development impact fees to the maximum amount allowed by State law. The City of Hanford does not issue building permits unless fees are paid to the School Districts.

Monitoring: Each District is responsible for collecting the development impact fee. The City of Hanford does not issue building permits unless school impact fees have been paid.

4.13.7. Parks

Parks and recreation facilities are discussed in Section 4.14 of this EIR.

4.13.8. Other Public Facilities

Other public facilities such as water, sewer, drainage, and solid waste are addressed in Section 4.16 of this EIR.

4.14. RECREATION AND RECREATIONAL FACILITIES

4.14.1. Environmental Setting

The City of Hanford adopted a Parks and Recreation Master Plan in the year 2000. This plan defines the parks and recreation needs of Hanford and identifies programs that can be implemented to address those needs. The Parks and Recreation Master Plan is consistent with the Hanford General Plan

Park Facility Standards

Standards provide a means of measurement for the allocation of recreational space and facilities for people in a given area. Standards can also be used to determine whether an existing developed area has an excess, or a deficiency of, recreational space and/or facilities. Finally, standards can be used to establish programs to help make improvements and better meet the recreational needs of the community. The following standards define the various park types for the City:

Neighborhood Park

A neighborhood park is designed to meet local "neighborhood" needs and is intended to be within walking or bicycling distance of one-half mile from their residence. A neighborhood park service area should not cross any major natural or manmade barriers (i.e., railroads, waterways, major roadways such as arterials) that inhibit access to the park. Neighborhood Parks usually emphasize children orientated facilities, providing a variety of play spaces and associated amenities.

Within the City of Hanford, many of the existing neighborhood parks are located near to elementary schools, providing a greater range of activities at one site. Neighborhood parks are usually designed to serve an area with a population ranging from 1,000 to 3,000 residents. For ease of maintenance, and efficiency of use, a neighborhood park should provide five to ten acres. The size of the park and the type of facilities incorporated within the park site should reflect the needs and characteristics of the current and projected population to be served by the park. When an elementary school is fairly centrally located to the population area being served, parkland and recreational facilities may be best located and planned at the school to optimize the use of the school outdoor and indoor facilities, and to supplement rather than duplicate facilities within the school site. However, there may be a use conflict where elementary schools are used for year-round education, and additional facilities may be necessary.

Community Park

Community parks serve a group of neighborhoods, generally three to five neighborhoods, within a one mile radius service area. Since patrons typically drive to use community parks, they should be easily accessible from arterial and collector streets. Community parks supplement the neighborhood parks by providing for activities that require more space and special facilities. In addition, community parks

may also serve as the neighborhood park for the immediate neighborhood. Community park amenities are oriented to both adults and children, often providing specialized facilities such as tennis courts, community centers, swimming pools, and sports fields such as baseball, softball and soccer.

Community parks are generally between 20 and 50 acres. Community parks can also be developed as joint-use facilities able to accommodate seasonal storm drainage basins, water wells and noise attenuation measures.

Regional Park

Regional parks or recreational areas are designed to serve an entire community or district and are usually over 50 acres in size. Regional parks may be large natural or preservation areas along waterways, adjacent to water bodies or scenic areas preserved for the use by the general public. Regional parks fulfill a special need in that they offer a relaxing environment of family and group activities.

Open Space

An open space area is typically a large undeveloped area intended to serve as a greenbelt, or visual break to development, or to address public health and safety needs (i.e, noise sensitive areas). Open space can also be used to protect an environmental resource, yet provide those types of recreational uses that do not substantially alter or destroy the natural environment. Low intensity recreational uses such as walking and bicycling are often compatible with open space areas. Open space can often be designed to serve dual purposes such as noise buffers, water recharge and storm drainage. Land designated as Open Space may also be actively farmed.

Linear Parks and Trails

A linear park is a strip of land established for the purpose of walking or bicycling. Linear parks often include natural or man-made linear sources such as sloughs, utility right-of-way or service roads. Several existing watercourses and railroad right-of-way traversing the City could provide excellent opportunities for linear trail systems. Linear trails may be used to buffer noise sources, such as a rail right-of-way, or soften the impact of a wall or other utilitarian feature.

Pedestrian and bicycle trails are identified in the General Plan Circulation Element and the Regional Bicycle Plan.

Existing Park &Recreation Facilities

Through its Recreation Department and Parks Division, the City operates and maintains 18 neighborhood parks comprising a total of 36.8 acres. Eleven of the parks are currently developed. The City has three community parks, Centennial Park, Youth Athletic Complex and the Hidden Valley Park. Community parks and sports fields occupy approximately 94.2 acres within the City. Presently 20 acres of the planned 40

acre Hidden Valley Community Park is developed. Over all, the City inventory of parkland consist of approximately 169.1 acres.

In addition to the City facilities there are another 58.1 joint use facility sports fields including the High School Sports Field (10.1 acs.), West High School Softball Field (2 acs.), JFK Sports Fields (11 acs.), and the Soccer Complex (35 acs.) The Hanford School playgrounds and sports fields provide an additional 118.25 acres of open space to the community. Some facilities require rental.

Each individual park site contains various types of facilities, which are based on the needs of the residents served by the park, park size and geographic characteristics. Picnic areas and playground equipment are usually deemed essential for a park to serve the surrounding neighborhood. Of the City's 11 developed neighborhood parks, nine provide picnic facilities, and ten provide playground apparatus. Specialized recreational facilities (e.g., tennis courts, swimming pool, ball fields) exist at seven of the City's facilities. The most common specialized facilities are lighted ballfields.

Kings County Park Facilities

Hanford residents enjoy the use of three County parks, which provide regional recreational opportunities; Burris, Laton-Kingston and Hickey Parks. The County has developed Park Master Plans for these three parks. Burris Park is located approximately 12 miles north of Hanford and offers a combination of active and passive recreation. Laton-Kingston Parks are located adjacent to one another on the Kings River approximately 10 miles north of Hanford. The focus of these parks is primarily passive recreation. The park's beach areas are very popular for sunning and swimming when the Kings River is flowing. Hickey Park is located approximately eight miles northwest of Hanford. This is the most highly used park in Kings County. This park offers a combination of passive and active recreation.

Kings County owns and maintains La Casa Park located at the Highway 43 and 10th Avenue entrance to the City of Hanford. This small facility provides open space, picnic area, and a "park and ride" facility. A "City of Hanford" monument sign has been erected. The 10th Avenue entry to the City has been relocated to the south side of the Park

Public School Facilities

School playground equipment, ball fields, play courts and open grass areas meet some community and neighborhood recreational need in nearly all areas of the City. The school facilities most often used for recreation are play fields and various ball courts (i.e., basketball, tennis, volleyball). Interior facilities such as gymnasiums and multi-purpose rooms are also used, but are typically only available for organized activities. The Hanford High School District contributes to community recreation needs through use of on-site facilities and programs for adult education, athletics, and social and cultural activities. The District's East Campus facilities include a football stadium, playing fields, tennis courts, gymnasium, performing arts center and swimming pool.

The expansion of the West Campus now offers additional facilities that include ball fields, presentation center/gymnasium, an exercise room and a competitive swimming and diving facility. Currently, the High School District is planning the New Hanford High School/Learning Center that is anticipated to include a campus for the College of the Sequoias and a City Community Park and recreation area. This facility is planned near 13th Avenue between Lacey Blvd. and Grangeville Blvd.

The Hanford Elementary School District provides neighborhood park level recreation facilities to the community. Facilities include paved areas for court games, playground equipment, free play turf areas, softball diamonds, and fenced tot-lots. Youth and adult recreation programs are offered at these sites on evenings and weekends.

Park Acreage Standards

To effectively meet the needs of the community, park standards for both community and neighborhood parks are contained in the General Plan. In development of these standards three factors were considered:

- The population projections for the development area;
- Siting criteria for new facilities including major roadways and schools;
- Minimum park size to provide efficient maintenance.

Table 4.14- 1

City of Hanford General Plan Park Standards

Park Type	Acres Per 1,000 Persons	Acres Per Park	Service Area
Neighborhood	1.5	5 to 10 acres	1/2 mile
Community	2.0	20 to 50 acres	2 miles

Park Location & Service Area

Access and security are the two most important considerations in placement of parkland. Neighborhood parks should be easy to walk to, not require small children to cross arterials, railroads, major canals or other obstacles. The design of the park should limit backup lots, and encourage new development to face the park. While this may increase development costs of the park through the need of more sidewalk and roadway, this cost is offset by greater security. Public safety officials should be able to see into the park easily from the street.

Community parks are intended for more adult-oriented and organized sport activity. As such, adequate vehicle access and parking should be provided. Often a portion of the Community Park is developed to allow for its use as a neighborhood park by surrounding residences.

4.14.2. Impact Analysis

4.14.2.a Methodology

The General Plan shows parklands in general locations that generally meet the standards established by the General Plan. The locations shown on the General Plan Land Use Map are not meant to be exact, rather a general location for a future facility. The locations were evaluated in terms of meeting park development standards and whether the locations would conflict with any topographical feature or known hazards. This analysis is not meant to be exhaustive and park siting will be subject to additional environmental review. Location of parkland is typically associated with residential areas. The level of activity and development at certain parks are assumed to be consistent with residential development and other parks found in residential areas. Parks may be developed with play fields with nighttime lighting and host regularly scheduled team sports that may generate noise.

4.14.2.b Thresholds of Significance

A significant impact would result if a project would

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

4.14.2.c Impacts

Build out of the General Plan would cause an increase in population and the demand for additional recreation and open space. As shown in Table 4.14- 1, a ratio of 1.5 acres of neighborhood park per 1,000 population, and 2.0 acres of community park per 1,000 population has been established by the General Plan. The size and location of the parks will also depend on timing of development and siting of other City or school facilities if joint facilities are developed.

The acreage needs and public parkland ratios may be adjusted to account for on site private recreational facilities, extended landscaping or pedestrian walkways, and other development amenities. Regional parks were not included in the City's parkland ratio since by their nature, they are more likely to be located outside of the City's planning area. Given these ratios, Table 4.14- 2 indicates the additional parkland needed to accommodate the projected population growth.

Table 4.14- 2

Parkland Need From Projected Population Growth

Year	Population	Increase[1]	Cumulative Park Land Need	
			Neighborhood[2]	Community[3]
2001	43,575			
2010	54,339	10,773	16.2	21.5
2020	71,633	28,058	42.1	56.1
2025	82,239	38,664	58.0	77.3

[1]From the 2001 population of 44,111.
[2]Based on 1.5 acres per 1,000 for Neighborhood Parks.
[3]Based on 2.0 acres per 1,000 for Community Parks.

Adverse impacts associated with a deficit of parkland acreage are considered potentially significant..

The General Plan Open Space/Conservation, and Recreation Element, and the Land Use Element contain several Policies and Programs which help mitigate impacts associated with implementation of the General Plan, particularly growth management policies. Specifically, Policy OCR 4.1, Program OCR 4.1 - A, *Objective OCR 13, Policy OCR 13.1, Policy OCR 13.2, Programs OCR 13.2 - A through C, Objective OCR 14, Policy OCR 14.1, Programs OCR 14.1 - A through D, Policy OCR 14.2, Programs OCR 14.2-A through D, Objective OCR 15, Policy OCR 15.1, and Policy OCR 15.2.*

4.14.2.d Mitigation Measures

No mitigation measures are required beyond the Policies and Programs contained in the General Plan. The General Plan Land Use Element, Circulation Element with regard to trails, Open Space/Conservation, and Recreation Element, and the Public Facilities Element contains several Policies and Programs which mitigate impacts associated with implementation of the General Plan. Specifically Policy LU 1.1, Program LU 1.1 – A through D, Policy CI 8.3, Policy CI 8.4, Objective OCR 4, Policy OCR 4.1, Program OCR 4.1-A, Objective OCR 5, Policy OCR 5.2, Objective OCR 13, Policy OCR 13.1, Policy OCR 13.2, Programs OCR 13.2 - A through C, Objective OCR 14, Policy OCR 14.1, Programs OCR 14.1 - A through D, Policy OCR 14.2, Programs OCR 14.2-A through D, Objective OCR 15, Policy OCR 15.1, and Policy OCR 15.2., Objective PF 2, Policy PF 2.1, Policy PF 2.2, Policy PF 2.3, Objective PF 3, and Policy PF 3.1.

Level of Significance After Mitigation

Less than Significant

traffic increases on roadways the exceedances of Community Noise Standards near major roadways is a potentially significant impact that can be mitigated by the application of appropriate noise attenuation measures. As residential growth continues along the BN &SF railroad, noise attenuation will be required to reduce noise impacts to those future residents. Overall, the noise environment in the Planning Area will change from rural/agricultural to an urban setting. This is considered a less than significant impact.

4.17.12. Population/Housing/Employment

The physical area of the General Plan Planning Area can accommodate forecasted population and housing growth. The population growth projections for Hanford are within the limits anticipated for Kings County and forecasted by the State Department of Finance. The jobs/housing balance should be improved with the planned expansion of commercial and industrial uses within the Planning Area. No cumulative impacts from population, housing, or employment are anticipated from implementation of the General Plan.

4.17.13. Public Services

The growth in population, housing, commercial and industrial uses will increase the number of emergency calls and law enforcement responsibilities. This increased demand will require the expansion of personnel, equipment, and space for these public safety departments. Increased street mileage, drainage facilities, water, sewer, solid waste collection, street sweeping, and public buildings will increase the need for additional Public Works personnel, equipment, and facilities. Growth in municipal services and the collection of development impact fees is expected to off-set potential adverse environmental effects. School facilities would be significantly impacted by cumulative population increases with an estimated 11,480 new students. School Districts have the ability to collect school impact fees from new development to provide part of the funds necessary to expand their facilities. This is a less than significant impact.

4.17.14. Recreation

Growth in park acreage and the demand for additional recreation services will increase the need for Parks and Recreation personnel, equipment, and facilities. At 2025 build-out of the General Plan an additional 58 acres of Neighborhood Park and 77 acres of Community Park will be needed to serve the forecasted population. Parks and Recreation fees are collected from new development to assist in funding park expansion projects. This is a less than significant impact.

4.17.15. Transportation/Circulation

The traffic analysis provided for the future development of the General Plan indicates that regional systems, including the State Highway system, will have to be modified and improved to accommodate increased travel to and from the Planning Area. These greater demands on existing systems will have a significant cumulative impact that can be mitigated by implementing Objectives, Policies, and Programs contained in the

General Plan including the collection of development impact fees for traffic and/or the construction of traffic improvements on a project-by-project basis. This is a less than significant impact.

4.17.16. Utilities and Service Systems

Planned growth within the Planning Area will require the extension of public utilities and service systems. Expansion of water treatment and distribution, wastewater collection and treatment, solid waste collection, recycling, and disposal, as well as the provision of electrical and natural gas energy will be required as the City grows. The City continues to plan for the expansion of their facilities based on the General Plan Land Use Plan. Development is required to fund improvements through development impact fees or by the installation of systems to serve their projects. Public utility companies also plan to provide expanded services as part of their capital improvement programs. Cumulative demands on utilities and service systems are not considered significant when General Plan Programs and Policies are implemented.

5. ALTERNATIVES

5.1. Introduction

In accordance with Section 15126 of CEQA Guidelines, the EIR must analyze a range of reasonable alternatives to the proposed project that could feasibly attain the objectives of the project. This section identifies several alternatives to the proposed project and qualitatively evaluates the impacts of each alternative to those impacts that have been identified for the proposed project. Specifically Section 15126(d) requires an EIR must:

> "...analyze a range of reasonable alternatives to the proposed project which would feasibly attain most of the basis objectives of the project, but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives."

For a project specific EIR, such as a subdivision or shopping center, project alternatives can be clearly defined in terms of different sites and alternative building styles within the broader range of project goals. With a General Plan update however, discussion of project alternatives can only involve an analysis of different variations of policies affecting housing, industry, transportation, ect., that are similar or identical to the existing General Plan. As required by CEQA, the project alternatives must be designed to avoid or substantially lessen any significant effects of the proposed project.

The General Plan is the written expression of expectations of the City of Hanford regarding development within and adjacent to the existing City. In this regard, the entire General Plan is designed to provide a policy framework within which subsequent development can be evaluated, to ensure the least amount of impact to the established City. Alternatives to this framework were discussed at every level of discussion in preparation of the General Plan. The General Plan Goals, Objectives, Policies and Programs function both as guidelines for future actions, and as community wide mitigation measures for a variety of potential environmental impacts discussed in this EIR. Only two significant unavoidable impacts remain beyond feasible mitigation: cumulative air quality and the conversion of farmland to urban uses.

5.2. No Project Alternative

For the purposes of this EIR, the no project alternative assumes that the existing General Plan remains unaltered including the Planning Area boundary, Land Use Map and Objectives, Policies, and Programs as stated in the 1994 General Plan.

The boundaries of the plan are currently sufficiently large to enable the City to accommodate growth with out expansion for more than the next 30 years. After this, the City may be under increased pressure to expand its General Plan due to a lack of vacant developable land within the Planning Area. Vacancy rates would probably decrease, and the cost of rental and low-income housing would probably increase.

Costs of new homes would probably also increase, although development in surrounding communities and Kings County might absorb some of the demand for

housing. Substantial redevelopment of older neighborhoods would occur increasing density to accommodate some future population beyond the horizon of this General Plan. Provision for "Planned Office" development, guidance for 10th Avenue Mixed Commercial, guidelines for conversion of older structures to "Residential/Office" in the Redington, Irwin, and Douty area, allowing "Residential/Office" along Grangeville Blvd., "Planned Highway Development" at Highway 43 and Lacey Blvd., and minor amendments to the existing General Plan would not occur. Piecemeal amendments to the General Plan to address these issues would be addressed by the City as necessary.

5.2.1. Impacts to Agricultural Land

The Planning Area boundaries include the undeveloped agricultural land planned for urban development. Implementation of the current General Plan would have the same or similar impact, loss of agricultural land.

5.2.2. Impacts to Air Quality

The current General Plan contains many Objectives, Policies, and Programs to assist in reducing impacts to air quality from growth in the City. The proposed General Plan does not substantially alter these positive policies not substantially enlarge the Planning Area boundary. The impact to air quality in the existing General Plan and in the proposed General Plan is significant and unavoidable.

5.3. Smaller Planning Area

Under this alternative, the Planning Area would be reduced. The General Plan Objectives, Policies, and Programs would address a much higher density development than currently allowed in the 1994 General Plan. Residential development would become more compact than the 4 to 5 units per net acre envisioned by the General Plan. The range of lot sizes available to would be restricted. The amount of industrial and commercial land contained in the Planning Area would be reduced. Planning for higher capacity streets to handle the more compact development would be required.

Implementation of this alternative would ignore the land need based on forecasted population growth at densities acceptable and customary in Hanford. The City may be faced with a continuous flow of applications to amend the General Plan to enlarge the Planning Area boundaries. Such expansions would be in conflict with the City's reduced infrastructure master plans to serve a smaller Planning Area. A smaller Planning Area has the potential to increase competition for available land would escalate land prices resulting in higher housing costs and costs for public facilities such as schools, public buildings, and parks. While a more compact City would encourage the use of public transit because more population in a smaller area would create increased traffic on streets serving residential, commercial, and industrial areas, it is anticipated that additional traffic would result in the need for larger capacity streets. More traffic congestion and lower levels of service on streets can be expected. It is anticipated that redevelopment of older larger lot neighborhoods would be advanced to take advantage of land aggregation activities to achieve higher densities. An increase in housing prices is expected to result making affordable housing less available. Additional governmental assistance or developer extractions to provide for affordable housing would be necessary. Redevelopment of older neighborhoods would require substantial capital

investment to upgrade water, sewer, and drainage facilities to reorganize and expand capacity to accommodate more density of development.

While impacts to the amount agricultural land needed for development may be reduced, other impacts may be exacerbated. Impacts from increased traffic in smaller areas, impacts to housing and public facilities, impacts to water and wastewater systems, and potentially air quality can be expected.

5.3.1. Impacts to Agricultural Land

The Planning Area could be constrained by an estimated 35% in this alternative. Using this estimate the amount of agricultural land converted to urban use by 2025 would be reduced from 5,518 acres to 3,586. This reduction is achieved by increasing low residential density to 7 units per net acre (an average of 4,000 square foot lots), increasing the amount of high density land uses, removing very low density residential from the Planning Area, eliminating the residential market factor, reducing the amount of service commercial and industrial land in the Planning Area. The impact on the amount of cultivated agricultural land converted to urban use would decrease from 0.9% to 0.6%. The net impact reduction is about three tenths of one percent.

5.3.2. Impacts to Air Quality

Air quality impacts are anticipated to be more concentrated in the same proportion to the higher density of urban uses providing for the same forecasted population. It is likely that with more traffic in a smaller geographic area the potential for concentrations of CO at intersections will be greater. Off setting this possibility is that with traffic congestion and lower levels of service on streets, more compact development, alternative forms of transportation will become more popular such as public transit, pedestrian, and bicycle modes and less reliance on automobiles. A higher density reduces the amount of area devoted to landscaping within residential and commercial areas. Because of higher densities, buffer distances between potentially odorous activities in heavier commercial and industrial areas will be reduced. The interface between agriculture and urban uses will remain at the margins of the developing area in this alternative. Air quality impacts are expected to remain significant and unavoidable.

5.4. Alternative Project Design Growth to the East

Under this alternative, the primary emphasis of growth would be toward the east and Highway 43. The Planning Area on the westside of the City would be reduced. This alternative would ignore the existence of infrastructure to efficiently accommodate growth on the westside of the Planning Area, and would require the construction of new sewer and water lines.

Reducing the Planning Area to the west would force higher densities in the balance of the Planning Area. The City could anticipate substantial pressure to allow General Plan Amendments for growth in the west because there is adequate sewer capacity remaining.

Implementation of this alternative would also require the expansion of the existing

roadways and construction of new arterial streets to accommodate the new growth. Once expanded, the roadways may be more efficient than continued build-out to the west.

While soils in this area of the General Plan are considered of poorer quality, the loss of agricultural land would remain equal to the amount of urban use constructed. In addition to public service infrastructure being extended, commercial growth would have to take place to provide for the daily needs of the new residents. Otherwise, new residents that could not obtain services in the downtown would have to travel to the west side of the City. This has the potential to increase cross town traffic congestion and air quality impacts until adequate commercial areas were developed. Growth on the eastside would advance planning and improvements on Highway 43 to accommodate increased traffic in this part of the Planning Area.

Encouragement of growth in the east, may provide for additional investment in the eastern portions of the downtown area, and allow for the construction of improvements on Highway 43 and Highway 198. These improvements may be of economic and environmental benefit to this area of the City.

Due to existing infrastructure limitations and the substantial capital cost, this alternative was not seen as immediately feasible.

5.4.1. Impacts to Agricultural Land

The Planning Area would be reduced by about 20% in this alternative. It is estimated that the eastside of the City contains about 1,280 acres in the eastside of the Planning Area that are planned for urban use. This amount will not accommodate the amount of population growth anticipated for the City (including full build-out of residential land south of Highway 198). Eventually some portion of the westside of the Planning Area is anticipated to be developed and would be the topic of a future General Plan Amendment. The loss of agricultural land would remain a significant unavoidable impact.

5.4.2. Impacts to Air Quality

Similar impacts to the proposed General Plan are anticipated in this alternative. However, greater initial impacts are anticipated with the need for population on the eastside of the Planning Area to travel for commercial services in the downtown or on the westside of the Planning Area if services are not available in the downtown. Congestion is expected on streets until commercial uses are constructed.

5.5. Environmentally Superior Alternative

The proposed General Plan is considered the environmentally superior project for the following reasons:

- The Proposed Plan makes efficient use of existing infrastructure to accommodate growth within the planning horizon.

- The smaller Planning Area alternative would reduce the impact on agricultural land conversion, however it has the potential to substantially increase the environmental impacts in other areas. The loss of agricultural land would still be considered substantial and unavoidable. Air quality impacts are anticipated to remain significant and more concentrated with higher densities.

Table 5 - 1 is a matrix of the alternative evaluation. This matrix evaluates the alternatives against the proposed project using symbols to indicate: "+" more of an environmental impact, "-" less of an environmental impact, or "0" similar environmental impact.

Table 5 - 1

Project Alternative Evaluation Matrix

Environmental Subject	No Project	Smaller Planning Area	Eastside Development
Aesthetics/Visual	-	-	-
Agricultural Resources	0	+	0
Biological Resources	0	+	0
Geology and Soils	0	0	0
Cultural Resources	0	-	0
Hazards and Hazardous Materials	0	+	0
Air Quality	0	+	0
Hydrology/Water Quality	0	+	+
Land Use/Planning	+	+	+
Mineral Resources	0	0	0
Noise	0	+	0
Population & Housing	0	+	+
Public Services	0	+	0
Recreation	0	+	0
Transportation/Traffic	0	+	+

6. SIGNIFICANT UNAVOIDABLE EFFECTS WHICH CANNOT BE AVOIDED IF THE GENERAL PLAN IS IMPLEMENTED

6.1. Introduction

Section 15126 (b) of the CEQA Guidelines specifies that the Environmental Impact Report must include a description of any significant impacts, including those which can be mitigated but not reduced to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should be described.

Section 4 of this EIR identifies the environmental impacts pursuant to the CEQA Statues and Guidelines of the proposed General Plan and includes recommendations for mitigation measures to reduce or eliminate identified impacts. The following impacts remain unavoidable and adverse, should the proposed General Plan be implemented.

6.2. Air Quality

Implementation of the General Plan in combination with all other development activity and continued agricultural operations in the region would contribute to significantly increased air pollution and impacts on air quality. The General Plan would increase the ratio of commercial and industrial development to housing which has the potential to reduce the need for and length of automobile trips. Mitigation of regional air quality impacts can only be addressed in a comprehensive manner by the San Joaquin Valley Air Pollution Control District. The General Plan's Objectives, Policies, and programs demonstrate a commitment to participate in region-wide solutions in concert with neighboring cities and counties. The General Plan also contains Objectives, Policies, and Programs that assist in minimizing cumulative air quality impacts.

6.3. Agriculture Resources

The potential loss of 5,518 acres of agricultural land by the 2025 build-out of the General Plan is a significant and unavoidable impact. The General Plan Planning Area Boundary is the same as the 1994 General Plan with the exception of adding 125 acres at the intersection of Highway 43 and Lacey Blvd. The City has made efforts to preserve farmland with the acquisition of 1,600 acres south of the Planning Area. Implementation of General Plan policies will assist in the premature conversion of agricultural land to urban uses and help to mitigate impacts associated with urban/agriculture land use conflicts and buffers.

The City of Hanford is essentially surrounded by Prime and Statewide Importance farmland. Implementation of the General Plan will encroach on these farmlands and any conversion of prime farmland is considered cumulatively significant and an impact that cannot be mitigated.

A total of 3,260 acres of Prime Agriculture and 3,291 acres of Statewide Importance within the Planning Area would be converted to non-agriculture land use resulting in a significant impact. Approximately 3,545 acres of land within the Planning Area are in

Williamson Act contracts and are eventually expected to be converted to non-agriculture land uses resulting in a significant impact. The General Plan proposes policies and objectives, which help alleviate impacts associated with conversion of agriculture land. Although implementation of General Plan Goals, Policies and Objectives help mitigate impacts the effects of the loss of agricultural land, such loss is considered an cumulatively significant unavoidable impact.

6.4. Significant Irreversible Environmental Changes

Implementation of the General Plan would result in the irreversible changes to the environment. The irreversible commitment of resources associated with the proposed project include the following:

1. Conversion of approximately 5,518 acres of agricultural land to residential, commercial, industrial and urban recreational uses by the year 2025.

2. Degradation of air quality associated primarily with increased automobile travel;

7. THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Economic and social pressures for growth in the Central Valley, and in Kings County, are such that complete protection of the environment at the expense of community growth and well-being is not likely. Therefore, a balance must be sought that accommodates the needs of the growing population of the Central Valley, while maintaining the integrity of the environment to the degree that is practically feasible. It is the degree to which this balance is achieved in a given project that establishes the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity. The proposed land uses for the Planning Area, as well as policy framework in which these uses would be developed, consist of mechanisms that promote a well-planned environment while attempting to minimize the long-term environmental consequences.

The General Plan, in itself is a long term (23 year) plan, which addresses how and where to direct the projected increase in population and employment in the City of Hanford. However, short-term (less than 23 years) uses of the environment would occur immediately within the Planning Area as the projected development envisioned in the General Plan takes place. Implementation of the proposed General Plan would result in long-term physical alterations in the environment due to direct and indirect effects of continued urbanization and population growth in the Hanford area. Although the changes in the environment in the environment brought on by urbanization will be permanent and long-term, the continued growth and development of an urban area can, in relative sense be thought of as being motivated by short-term but important economic and social needs, such as the need for jobs, affordable housing and increased tax base in the community.

As land is developed, there are several unavoidable adverse environmental impacts, some of which have long-term effects. The short-term impacts are the addition of traffic, noise, and air pollution created by construction activity. By definition, these impacts are temporary.

New construction associated with the General Plan would have a number of long-term consequences due to the expected lifetime of structures and associated infrastructure. This portion of the Central Valley would be irreversibly altered by the following:

- Conversion of agricultural land;
- Impact upon groundwater supplies;
- Degradation of air quality due to increased growth;

A number of other impacts associated with the long-term productivity of the environment could occur (please refer to individual topical sections in Chapter 4 of this EIR) if Policies and Programs in this General Plan are not implemented. Many of the General Plan Policies and Programs are designed to protect the long-term productivity of the environment, on both a local and regional scale. The General Plan Goals, Objectives, Policies and Programs would attempt to manage the use of environmental resources and to balance competing needs and interests in Kings County.

8. SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD OCCUR IF THE PROPOSED ACTION IS IMPLEMENTED

Implementation of the General Plan would result in the short-term commitment of non-renewable and/or slowly renewable energy resources, human resources, and natural resources such as lumber and other forest products, sand and gravel, asphalt, steel, copper, lead, other metals, and water due to construction activities.

As the community develops, both residential and non-residential development would require further commitment of energy resources in the form of natural gas and electricity generally by coal, hydroelectric power or nuclear energy. Increased motor vehicular travel in the Planning Area would be accompanied by increased consumption of petroleum products. An increased commitment of social services and public maintenance services, e.g., waste disposal and treatment, would also be required.

Development of currently vacant and agricultural lands is a significant, irreversible environmental effect as it is not likely that land would revert to its original condition. In turn, developing currently vacant or agricultural land results in a significant, irreversible environmental effect on biological resources and agricultural land for the same reason. The General Plan calls for the intensification and development of land in the Planning Area. Currently, vacant land represents approximately 59.4 percent of all lands within the Planning Area. Agricultural lands either in production or fallow represents almost all of this vacant land. By the year 2025 implementation of the General Plan will convert approximately 5,518 acres of agricultural land to urban use (this amount includes 1,346 acres considered "residential market factor" land that is available for development, but not yet developed). Total build-out of the General Plan, beyond the planning horizon, could conceivably convert as much as 6,551 acres of agricultural land to urban use.

The proposed General Plan includes policies to protect designated open space areas, as well as the preservation of identifiable documented biological resources. However, the General Plan is premised on development of large areas of currently vacant land.

9. GROWTH INDUCING IMPACTS OF THE PROPOSED PROJECT

Pursuant to the State CEQA Guidelines, Section 15126(g), an EIR must address the growth inducing impacts of a project. Growth inducing refers to the way in which the proposed project could "foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment". Growth can be induced in a number of ways, such as the elimination of obstacles to growth or through the stimulation of economic activity within a region. Further, the proposed project's characteristics "which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively" must also be evaluated.

In accordance with State CEQA Guidelines, Section 15126(g), induced growth is not considered "necessarily beneficial, detrimental". Induced growth is considered a significant impact only if it directly or indirectly affects the ability of agencies to provide needed services, or if it can be demonstrated that the potential growth could significantly affect the environment.

The General Plan Update, in itself, could be considered growth inducing by the designation of 2,691 acres of land for future residential development or an estimated 14,170 residential units to accommodate the projected 2025 population of 85,239. However, this General Plan Update does not increase the Planning Area from the existing boundary with the exception of 125 acres at Highway 43 and Lacey Blvd.

The actual development of land uses proposed in the General Plan is dependent upon a number of variables, including site-specific constraints and market forces. Target intensity/density describe the level of development that is expected to occur with implementation of the General Plan. It is important to note that the forecasted population and dwelling units represents a 2025 build out. The target intensity/density is the midpoint of the development range. Maximum development would occur in instances where a proposed project provides public amenities or benefit.

Growth-inducing impacts fall into two general categories, direct and indirect. Direct growth-inducing impacts are generally associated with the provisions of urban services to an undeveloped area. The provision of these services to a site, and the subsequent development, can serve to induce other landowners in the vicinity to convert their property to urban uses. Indirect, or secondary growth-inducing impacts consist of growth induced in the region by the additional demands for housing, goods, and services associated with the population increase caused by, or attracted to, a new project.

The purpose of a General Plan is to guide growth and development in a community. Accordingly, the General Plan is premised on a certain amount of growth taking place. The Central Valley has experienced dramatic growth in the past decade and this trend is expected to continue during the first two decades and possibly beyond in this century. The focus of the General Plan is providing a framework in which this growth can be managed and tailored to suit the needs of the community and surrounding area.

Population projections at build out within the Planning Area are 82,239 (assuming some portion of the land remaining vacant and build out at a density similar to the current density of Hanford.).

When roads and infrastructure are expanded, they are often capable of serving a larger population than that which needs to be served immediately to make the expansion economical. The extension of urban level services to the Planning Area Boundary may have an influence on development pattern along the fringes. The provisions of infrastructure to a site adjacent to the Planning Area Boundary can serve to induce lands outside the Planning Area to begin development. As with other land use issues, the proposed General Plan Update contains policies and programs to limit such speculation that development will occur outside of the Planning Area. To a certain degree, the City must rely on Kings County Land Use polices that require urban level development to occur in cities. Beyond that reliance, the City discourages breaching the Planning Area boundary by limiting the size of infrastructure as it approaches the Planning Area boundary. This limitation will not allow development beyond the Planning Area boundary without a General Plan amendment and substantial capital investment to provide infrastructure. The General Plan also requires lower density at the Planning Area boundaries to provide a buffer between more intense urban uses and the planned agricultural uses outside of the Planning Area.

At full-build out of the General Plan, development at target intensity/density could result in a total of over 35,700 dwelling units in the Planning Area. Development of non-residential uses using typical FAR's is estimated to be in the magnitude of approximately 47.6 million square feet within the Planning Area. Based on the available square feet by type of business and estimated number of employees per 1,000 sq.ft., approximately 37,600 jobs would be present within the Planning Area. The employment level, based on jobs per dwelling is expected to increase from the current estimated level 0.76 jobs per dwelling, to 1.05 jobs per dwelling. This impact is predicated on Hanford's intent to aggressively pursue industrial development in the Kings Industrial Park, and the expansion of commercial areas to serve residential growth projected for Hanford. A housing ratio of 1:1 is desirable as a sustainable community.

Demand for housing in Hanford may increase due to a number of new employment opportunities in the region, including the expansion Lemoore Naval Air Station. It is the desire of the City that implementation of the General Plan result in increased retail/commercial and industrial activity providing diversification in the City's economy. However, this growth is expected to be balanced by the proposed residential projects in anticipated in the General Plan and in the project vicinity. City residents will fill not all jobs created in the City. It is unrealistic to assume that past trends will be changed by implementation of this proposed General Plan Update. The City of Hanford will continue to draw employees from outside the City, as well as, provide homes for employees who work outside the City. Therefore, it is unavoidable that growth inducement may occur in other incorporated or unincorporated areas of Kings County and/or Fresno County, as the employment based is expanded in the City.

The proposed adoption of the General Plan is not considered growth inducing, but is a response to growth in Kings County.

10. GROWTH INDUCING IMPACTS OF THE PROPOSED PROJECT

10.1. CONTACTS

Kings County

Ron Hughes, Coordinator, Kings County Area Rural Transit
Bill Zumwalt, Kings County Planning Director
Greg Gatzka, Kings County Planning Department
Dennis Bray, Kings County Farm Bureau
Steven Schweizer, Kings County Farm Bureau
Tim Niswander, Kings County Farm Bureau
David Lear, Kings County Association of Governments

City of Hanford

Jan Reynolds, City Manager
Jim Beath, Planning Director
Brian DeCuir, Chief, Police Department
Gary Misenhimer, Director, Public Works Department
John Stowe, Associate Planner
Pat Morris, Chief, Fire Department
Teresa Zack, City Engineer, Public Works Department
Cathy Gregory, Recreation Director
Gordon McGowan, Parks Superintendent

Other

Joe Camara, Director, Facilities and Operations, Hanford Elementary School District
Walt Hanline, Kings River-Hardwick School District
Tom Hanson, Customer Service Planner, Southern California Edison Company
Hodges & Shutt, Santa Rosa
Pietro Facontir, Superintendent, Hanford Joint Union High School District
Al Diaz, CALTRANS
John Zumwalt, Zumwalt Hansen, Inc.
Steve Bogan, Superintendent, Armona Elementary School District.
John Webster, Superintendent, Pioneer Elementary School District
Donna Daniels, California Department of Fish and Game
David Hartesveldt, Live Oak Associates

10.2. CONSULTANTS

EIR Preparer

Valley Planning Consultants, Inc., Madera, California

Transportation and Circulation

Ken Anderson Traffic Engineers, Roseville, CA

Civil Engineer

Provost and Pritchard, Fresno, CA

10.3. BIBLIOGRAPHY

- Agricultural Crop Report, Kings County 2001, 2000, 1999, 1998.
- Applied Development Economics, City *of Hanford Economic Base (Draft),* 1992.
- Applied Development Economics, *City of Hanford Community Assessment (Draft),* 1992.
- Brown-Buntin Associates, Acoustical Analysis and Recommendations for Performance Noise Level Standards, prepared for the City of Hanford, 1986.
- Boyle Engineering Corporation, *Sewer System Master Plan,* prepared for the City of Hanford Public Works, Department, 1990.
- California Biodiversity News, Central Valley's Shrinking Farm Land, January 2002
- John Carollo Engineers, *Wastewater Treatment Capacity* Study, prepared for the City of Hanford, 1990.
- Cross Valley Rail Corridor Project, Initial Study/Environmental Assessment, prepared by Tom Dodson & Associates, October 2002.
- Department of Water Resources, San Joaquin District Groundwater Basins, December 2001.
- Federal Emergency Management Agency, Flood Insurance Rate Map, Hanford, California (Community Panel, Number 0600880005B), March 1987.

- Federal Emergency Management Agency, *Flood Insurance Study for the City of Hanford, California (Kings County),* Volume 1 of 1, undated.
- Hanford, City of, Draft Hanford Airport Master Plan, 1993
- Hanford, City of, Economic Base Study, 1992
- Hanford, City of, Storm Drainage Study of the Hanford Urban Area, 1985
- Hanford, City of, Zoning Map and Ordinance.
- Hanford, Parks and Recreation Master Plan 2000-2010, May 2000
- Hanford, City of, Resolution Number 92-25-(resolution creating the 12th Avenue sanitary sewer area of benefit district and establishing the sanitary sewer off-site facilities improvement fees for the district).
- Kings County Airport Land Use Compatibility Plan, 1993
- Kings County Association of Governments, Air Quality Determination for the 2001 Regional Transportation Plan, December 2001
- Kings County Pesticide Permit Conditions, January 2000
- Kings County Assessor's Parcel Maps.
- Kings County General Plan, December 1993
- Kings County General Plan Amendment #9 (Land Use) February 2001.
- Kings County Regional Planning Agency, KCRPA Bicycle Facilities Plan, 1983.
- Kings County Regional Planning Agency, 1992 Housing Element.
- Kings County Multi-Jurisdictional Household Hazardous Waste Element, March 1992
- Kings County, Countywide Integrated Waste Management Plan, April 1995

- New Hanford High School and Learning Center Site Selection Study, prepared by Michael Paoli & Associates, December 1999.

- San Joaquin Valley Unified Air Pollution Control District, Model Air Quality Element, 1993

- San Joaquin Valley Unified Air Pollution Control District, Guide for Assessing and Mitigating Air Quality Impacts, January 2002.

- San Joaquin Corridor Capacity Improvement, Gurernsey to Shirley Double Tracking from Mile Post 959.34 to 974.18 BNSF near Hanford, CA. Initial Study prepared by Tom Dodson & Associates for Department of Transportation, Central Region, July 2001.

- U.S. Department of Agriculture, *Soil Survey of Kings County,* 1986.

- U.S. Fish and Wildlife Service, Recovery Plan for Upland Species of the San Joaquin Valley, 1998

- USGS Hanford Quadrangle Maps.

- Zumwalt-Hansen and Associates, *Storm Drainage Study of the Hanford Urban Area,* prepared for the City of Hanford, 1985.

Notice of Preparation, Mailing List, and Responses

SCH# 2002021036

Notice of Preparation

To: See Attached List
(Agency)

Subject: **Notice of Preparation of a Draft Environmental Impact Report**

Lead Agency		**Consulting Firm (if applicable)**	
Agency Name	City of Hanford	Firm Name	Valley Planning Consultants
Street Address	317 North Douty Street	Street Address	200 N. Gateway Dr. #101
City/State/Zip	Hanford, Ca 93230	City/State/Zip	Madera, Ca 93637
Contact	Jim Beath, Planning Director	Contact	Thomas Skinner

The City of Hanford will be the Lead Agency and will prepare an environmental impact report for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

The project description, location, and the potential environmental effects are contained in the attached materials. A copy of the Initial Study (__is XX is not) attached.

Due to the time limits mandated by State law, your responses must be sent at the earliest possible date, but ***not later than 30 days*** after receipt of this notice. For reasons of clarity, **facsimile responses will not be considered.**

Please send your response to City of Hanford Planning Department at the address shown above. We will need the name for a contact person in your **agency**.

Project Title: City of Hanford General Plan Update

Project Location: City of Hanford (City (nearest)) Kings County (County)

Project Description (brief):
Update of General Plan (except Housing Element to be updated later this year) elements including land use, circulation, hazards management, open space, conservation and recreation, and public facilities and services. The General Plan planning area will remain identical to the current General Plan (1994) except for the addition of approximately 125 acres east of Highway 43 along Lacey Blvd. Land Use Map amendments are considered minor and do not substantially increase overall density or intensity of development in the Planning Area. Land Use Map changes also show locations of existing and planned school facilities. Policy amendments address Planned Commercial, Planned Office, 10th Avenue, Grangeville Office uses, Office conversion of historic structures (Douty, Irwin, and Redington), Planned Development Highway (Highway 43 and Lacey), and low density. See attached map showing proposed changes to General Plan Land Use Map.

Date January 25, 2002

Signature Jim Beath
Title Planning Director
Telephone (559) 585-2583

Reference: California Code of Regulations, Title 14 (CEQA Guidelines) Sections 1582(a), 15103, 15375. *Revised October 1989.*

Board of Supervisor/Clerk
1400 W. Lacey Blvd,.
Hanford, CA 93230

Kings Co. Association of Governments
Attn: Terry King
1400 W. Lacey Blvd.
Hanford, CA 93230

Kings Waste and Recycling Authority
7803 Hanford Armona Rd.
Hanford, CA 93230

Kings Area Rural Transit
Attn: Ron Hughes
1400 W. Lacey Blvd
Hanford, CA 93230

Kings Co. Library
401 N. Douty St.
Hanford, CA 93230

Dennis Bray, Ag Commissioner
Kings Co. Ag. Dept.
680 N. Campus Dr.
Hanford, CA 93230

Collar, Carol (UC Extension)
1400 W. Lacey Blvd.
Hanford, CA 93230

Draxler, Louise
10536 6th Ave.
Hanford, CA 93230-9324
Fire Department

Fire Chief
Kings County Fire Dept.
280 Campus Dr.
Hanford, CA 93230

Freitas, Judi
15220 13th Ave.
Hanford, CA 93230

NRCS/USDA
Attn: Vince Moreno
680 Campus Dr. Ste. C
Hanford, CA 93230

Historic Society
Hanford Carnegie Museum
108 E. 8th St.
Hanford, CA 93230

NRCS, State Air Quality Control, John Beyer
4974 E. Clinton, Ste 114
Fresno CA 93727

Larry Norris
Natrual Resources Conservation Svcs.
3530 W. Orchard Court
Visalia, CA 93277

Harry Verheul, Director
Kings County - Public Works
1400 W. Lacey Blvd., Bldg. 6
Hanford, Ca 93230

Loretta A. Tucker R.E.H.S.
Kings County – Dept. of Public Health
Div. of Environmential Health Services
330 Campus Dr.
Hanford, Ca 93230

Armona Community Services
10956 14th Ave.
Armona, CA 93230

Bill Zumwalt, Director
Kings Co. Planning & Development
1400 W. Lacey Blvd., Bldg. 6
Hanford, CA 93230

CalTrans, Dist. 6, Advanced Planning
P.O. Box 12616
Fresno, CA 93778

Moses Stites
CalTrans
P.O. Box 12616
Fresno, CA 93778

City of Corcoran, Jeri Grant
1033 Chittenden St
Corcoran, CA 93212

City of Lemoore, Ron Hoggard
119 Fox Street
Lemoore, CA 93245

Dept. of Fish & Game
1234 E. Shaw Ave.
Fresno, CA 93710

Donna Daniels
CA Dept. of Fish and Game
1234 E. Shaw Ave.
Fresno, CA 93710

Kings Co. EDC, Jay Salyer
120 N. Irwin St
Hanford, CA 93230

Kings Mosquito Abatement Dist
Attn: Gary Byde
10871 Bonneyview Ln
Hanford CA 93230

Lemoore NAS, PW Officer (Code 50)
700 Avenger Ave.
Lemoore CA 93246-5001

Native American Heritage Commission
915 Capitol Mall, Rm. 364
Sacramento CA 95814

RWQCB, Dist 5
3614 E. Ashlan Ave.
Fresno CA 93726-3533

SJVAPCD Southern Region Office
2700 M Street, Suite 275
Bakersfield CA 93301-2370

SJVAPCD
Attn: Dave Mitchell
1990 E. Gettysburg Ave.
Fresno, CA 93721

California State Clearinghouse
1400 Tenth St., Rm. 222
Sacramento, CA 95814

U.S. Dept. of the Interior
Fish & Wild Life Service
2800 Cottage Way Room W 2605
Sacramento, CA 95825

State of California
Dept. of Conservation
801 K St.
Sacramento, CA 95814-3528

Kamiran S. Badrkan, Ph.D
Superintendent/President
C.O.S.
915 S. Mooney Blvd.
Visalia, CA 93277

Kings River Water Conservation Dist.
200 N. Campus Dr.
Hanford, CA 93230

Kings Co. Fair
Attn: Beverly Baker, Manager
810 S. 10th Ave.
Hanford, CA 93230

Peoples Ditch Company
Attn: Dale Kuntz
1716 N. 11th Ave.
Hanford, CA 93230

Hanford Cemetery Dist.
10500 10th Ave.
Hanford, CA 93230

Last Chance Water Ditch Company
1716 N. 11th Ave.
Hanford, CA 93230

Lakeside Irrigation Water Dist.
Attn: Ken Cartwright
9304 Houston Ave.
Hanford, CA 93230

Kings Co. Water Dist.
Attn: Don Miles
200 Campus Dr.
Hanford, CA 93230

John Shelton, CEQA Coordinator
CA Dept. of Water Resources
3374 E. Shields, Rm. A7
Fresno, CA 93627

William Fishbough, Superintendent
Armona Union Elementary
11115 C St.
Armona, CA 93202

Jamie Perkins, Superintendent/Principal
Kings River-Hardwick Union Elementary
10300 Excelsior Ave.
Hanford,CA 93230

John A. Webster, Superintendent
Pioneer Union Elementary
8810 14th Ave.
Hanford, CA 93230

Chuck Draxler
Kings Co. Farm Bureau
870 W. Greenfield Ave.
Hanford, CA 93230

Dean I. Crechrlou, Superintendent
Armona Union Elementary
9895 7th Ave.
Hanford, CA 93230-9304

Ron Madruga, Superintendent
Lakeside Union Elementary
9100 Jersey Ave.
Hanford, CA 93230

Cindy Lee
Pac Bell Environ. Review
1250 E. Ashlan Ave
Fresno, CA 93704

Kevin Arellano, Planner
So. Cal. Edison
2425 S. Blackstone
Tulare, CA 93274

Cliff Ronk, BIA
Centex Homes
1840 S. Central Ave.
Visalia, CA 93277

Craig Scharton
Hanford Main Street
109 W. 7th St.
Hanford, CA 93230

Dick Jacques
1922 Roland Dr.
Hanford CA 93230

Hanford Chamber of commerce
Attn: Jerry Frazier
200 Santa Fe St.
Hanford, CA 93230

Building Industry Association
C/o Bob Keenan
315 Oak St.
Visalia, CA 93291

Joe Camera
Hanford Elementary School Dist.
P.O. Box 1067
Hanford, CA 93230

William Gundacker
2872 Spalding Dr.
Hanford, CA 93230

John Zumwalt
609 N. Irwin
P.O. Box 1380
Hanford, CA 93232

Pete Faconti, Superintendent
Hanford Joint Union High School Dist.
120 E. Grangeville Blvd.
Hanford, CA 93230

Larry Spikes, County Admin. Officer
Kings County
1400 W. Lacey Blvd.
Hanford, CA 93230

Nancy Alviso, County Clerk
Kings County
1400 W. Lacey Blvd.
Hanford, CA 93230

Ginnis, Kari - Fresno Bee
525 W. Main St., Suite E
Visalia CA 93291-6149

Hanford Sentinel
PO Box 9
Hanford CA 93232

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

State Clearinghouse

Gray Davis
GOVERNOR

Steven A. Nissen
DIRECTOR

Notice of Preparation

February 7, 2002

RECEIVED
FEB 15 2002
CITY OF HANFORD
COMMUNITY DEVELOPMENT DEPT

To: Reviewing Agencies

Re: City of Hanford General Plan Update
SCH# 2002021036

Attached for your review and comment is the Notice of Preparation (NOP) for the City of Hanford General Plan Update draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Jim Beath
City of Hanford
317 North Douty Street
Hanford, CA 93230

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Brian Grattidge
Project Analyst, State Clearinghouse

Attachments
cc: Lead Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
916-445-0613 FAX 916-323-3018 WWW.OPR.CA.GOV/CLEARINGHOUSE.HTML

State Clearinghouse Data Base

SCH# 2002021036
Project Title City of Hanford General Plan Update
Lead Agency Hanford, City of

Type NOP Notice of Preparation

Description Update of General Plan (except Housing Element to be updated later this year) elements including land use, circulation, hazards management, open space, conservation and recreation, and public facilities and services. The General Pan planning area will remain identical to the current General Plan (1994) except for the addition of approximately 125 acres east of Highway 43 along Lacey Boulevard. Land Use Map amendments are considered minor and do not substantially increase overall density or intensity of development in the Planning Area. Land Use Map changes also show locations of existing and planned school facilities. Policy amendments address Planned Commercial, Planned Office, 10th Avenue, Grangeville Office uses, Office conversion of historic structures (Douty, Irwin, and Redington), Planned Development Highway (Highway 43 and Lacey), and low density.

Lead Agency Contact

Name Jim Beath
Agency City of Hanford
Phone 559 585-2583 **Fax**
email
Address 317 North Douty Street
City Hanford **State** CA **Zip** 93230

Project Location

County Kings
City Hanford
Region
Cross Streets
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways
Airports
Railways
Waterways
Schools
Land Use Residential/Office/Commercial/Industrial/Urban Reserve/Agriculture/Hazards Management, Open Space, Conservation and Recreation/Public Facilities and Services.

Project Issues

Reviewing Agencies Resources Agency; Department of Conservation; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Game, Region 4; Native American Heritage Commission; State Lands Commission; State Clearinghouse; Caltrans, District 6; Department of Housing and Community Development; California Highway Patrol; Regional Water Quality Control Bd., Region 5 (Fresno)

Date Received 02/07/2002 **Start of Review** 02/07/2002 **End of Review** 03/08/2002

Note: Blanks in data fields result from insufficient information provided by lead agency.

NOP Distribution List

County: Kings

SCH# 2002021036

Resources Agency

- [x] Resources Agency
  Nadell Gayou
- [ ] Dept. of Boating & Waterways
  Bill Curry
- [ ] California Coastal Commission
  Elizabeth A. Fuchs
- [x] Dept. of Conservation
  Roseanne Taylor
- [ ] Dept. of Forestry & Fire Protection
  Allen Robertson
- [ ] Office of Historic Preservation
  Hans Kreutzberg
- [x] Dept of Parks & Recreation
  B. Noah Tilghman
  Environmental Stewardship Section
- [ ] Reclamation Board
  Pam Bruner
- [ ] S.F. Bay Conservation & Dev't. Comm.
  Steve McAdam
- [x] Dept. of Water Resources
  Resources Agency
  Nadell Gayou

Health & Welfare

- [ ] Health & Welfare
  Wayne Hubbard
  Dept. of Health/Drinking Water

Food & Agriculture

- [ ] Food & Agriculture
  Steve Shafter
  Dept. of Food and Agriculture

Fish and Game

- [ ] Dept. of Fish & Game
  Scott Flint
  Environmental Services Division
- [ ] Dept. of Fish & Game 1
  Donald Koch
  Region 1
- [ ] Dept. of Fish & Game 2
  Banky Curtis
  Region 2
- [ ] Dept. of Fish & Game 3
  Robert Floerke
  Region 3
- [x] Dept. of Fish & Game 4
  William Laudermilk
  Region 4
- [ ] Dept. of Fish & Game 5
  Don Chadwick
  Region 5, Habitat Conservation Program
- [ ] Dept. of Fish & Game 6
  Gabrina Gatchel
  Region 6, Habitat Conservation Program
- [ ] Dept. of Fish & Game 6 I/M
  Tammy Allen
  Region 6, Inyo/Mono, Habitat Conservation Program
- [ ] Dept. of Fish & Game M
  Tom Napoli
  Marine Region

Independent Commissions

- [ ] California Energy Commission
  Environmental Office
- [x] Native American Heritage Comm.
  Debbie Treadway
- [ ] Public Utilities Commission
  Ken Lewis
- [x] State Lands Commission
  Betty Silva
- [x] Governor's Office of Planning & Research
  State Clearinghouse Planner

- [ ] Colorado River Board
  Gerald R. Zimmerman
- [ ] Tahoe Regional Planning Agency (TRPA)
  Lyn Barnett
- [ ] Office of Emergency Services
  John Howden, Manager
- [ ] Delta Protection Commission
  Debby Eddy
- [ ] Santa Monica Mountains Conservancy
  Paul Edelman

Dept. of Transportation

- [ ] Dept. of Transportation 1
  IGR/Planning
  District 1
- [ ] Dept. of Transportation 2
  Vicki Roe
  Local, Development Review, District 2
- [ ] Dept. of Transportation 3
  Jeff Pulverman
  District 3
- [ ] Dept. of Transportation 4
  Jean Finney
  District 4
- [ ] Dept. of Transportation 5
  James Kilmer
  District 5
- [x] Dept. of Transportation 6
  Marc Birnbaum
  District 6
- [ ] Dept. of Transportation 7
  Stephen J. Buswell
  District 7
- [ ] Dept. of Transportation 8
  Mike Sim
  District 8
- [ ] Dept. of Transportation 9
  Colleen O'Brien
  District 9
- [ ] Dept. of Transportation 10
  Chris Sayre
  District 10
- [ ] Dept. of Transportation 11
  Lou Salazer
  District 11
- [ ] Dept. of Transportation 12
  Aileen Kennedy
  District 12

Business, Trans & Housing

- [x] Housing & Community Development
  Cathy Creswell
  Housing Policy Division
- [ ] Caltrans - Division of Aeronautics
  Sandy Hesnard
- [x] California Highway Patrol
  Lt. Julie Page
  Office of Special Projects
- [ ] Dept. of Transportation
  Ron Helgeson
  Caltrans - Planning
- [ ] Dept. of General Services
  Robert Gleppy
  Environmental Services Section

Air Resources Board

- [ ] Airport Projects
  Jim Lerner
- [ ] Transportation Projects
  Kurt Karperos
- [ ] Industrial Projects
  Mike Tollstrup

- [ ] California Integrated Waste Management Board
  Sue O'Leary
- [ ] State Water Resources Control Board
  Diana Edwards
  Division of Clean Water Programs

- [ ] State Water Resources Contr Board
  Greg Frantz
  Division of Water Quality
- [ ] State Water Resources Control Board
  Mike Falkenstein
  Division of Water Rights
- [ ] Dept. of Toxic Substances Co
  CEQA Tracking Center

Regional Water Quality Contr Board (RWQCB)

- [ ] RWQCB 1
  Cathleen Hudson
  North Coast Region (1)
- [ ] RWQCB 2
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- [ ] RWQCB 3
  Central Coast Region (3)
- [ ] RWQCB 4
  Jonathan Bishop
  Los Angeles Region (4)
- [ ] RWQCB 5S
  Central Valley Region (5)
  - [x] RWQCB 5F
    Central Valley Region (5)
    Fresno Branch Office
  - [ ] RWQCB 5R
    Central Valley Region (5)
    Redding Branch Office
- [ ] RWQCB 6
  Lahontan Region (6)
  - [ ] RWQCB 6V
    Lahontan Region (6)
    Victorville Branch Office
- [ ] RWQCB 7
  Colorado River Basin Region (7)
- [ ] RWQCB 8
  Santa Ana Region (8)
- [ ] RWQCB 9
  San Diego Region (9)

DEPARTMENT OF TRANSPORTATION
1352 WEST OLIVE AVENUE
P. O. BOX 12616
FRESNO, CA 93778-2616
TDD (559) 488-4066
OFFICE (559) 488-7306
FAX (559) 488-4088

March 1, 2002

2135-IGR/CEQA
6-KIN-43-18.42
NOP CITY OF HANFORD
GPA UPDATE

Mr. Jim Beath, Planning Director
City of Hanford
Hanford Community Development Department
317 North Douty Street
Hanford, CA 93230

Dear Mr. Beath:

Thank you for the opportunity to review the Notice of Preparation of a Draft Environmental Impact Report for the City of Hanford General Plan (1994) Update. Caltrans has the following comments:

1. The segment of State Route (SR) 43 north of SR 198 is planned for a 4-lane expressway with 170 feet of right-of-way expanded at intersections. The State of California has acquired the access rights along the easterly right-of-way alignment north of SR 198. It is recommended that the City coordinate their planning efforts with the State to Plan Line for the future right-of-way requirements on these corridors and their local feeder street needs. Because of the expressway status no access will be granted except at ½ mile intervals.

2. The General Plan indicates the State Route (SR) 43 and other freeway corridors should be targeted for high density, mixed use development. How will the increased traffic impacts to these streets and highways to be mitigated? Increased congestion on local roads can translate to increased congestion on State facilities as more people choose to travel on State routes to avoid overcrowded surface streets. Queuing at local intersections can impact the on and off ramps of State routes. It is recommended that the City coordinate their planning efforts with the State to identify future demand on these corridors to exam viable alternatives to address these issues.

3. **The General Plan planning area east of SR 43 along the north side of Lacey Blvd.**

Areas located in the northeast and northwest corners of the SR 198 Interchange at SR 43 would be designated for *Planned Highway Development* uses. Areas located along SR 43 between the railroad and Fargo Avenue would be *Urban Reserve* designated for residential and commercial development. The demand for the SR 198 Interchange at SR 43 would be expected to dramatically increase when such development occurs.

The expected increase in demand on the SR 198/SR 43 Interchange would likely require some operational improvements. These improvements may be in the form of signal controls and lane additions to the off-ramps. Structure widening may be required to accommodate additional lanes. Since the SR 43 Intersection at Lacey Boulevard is less than 125 m but over 60 m from the westbound off-ramp, only right-turn movements would be allowed at this local road intersection. Left-turn movements at the Lacey Boulevard intersection would likely be prevented by the placement of a raised median island. An option would be to realign Lacey Boulevard so that the intersection is over 125 m (160 m is preferred) from the off-ramp. It is recommended that any major development that would impact the SR 198/SR 43 Interchange be required to develop a Traffic Impact Study (TIS) or Project Study Report (PSR). It is further recommended that we review the scope of any TIS prior to work commencing on the preparation of the study. The study should be prepared in accordance with the State's guidelines for preparing traffic studies dated June, 2001. The scope needs to be sent to Caltrans before the TIS is conducted

4. The General Plan planning area west of 12th Avenue north and south of SR 198.

The City has indicated in the past a desire to improve the on and off ramp configuration to the interchange at SR 198/12th Avenue because the Interchange has had developments that have impacted the interchange (Medical/Government Center, Centex Homes, Pacific Grove, Ashton Park, Hanford Joint Educational Center). It is therefore estimated that the interchange will be further impacted and require future improvements to satisfactorily accommodate the future demand due to the change in land-use designations along 12th Avenue north and south of SR 198. The City will need to coordinate its planning and design efforts with the State as soon as possible. It is recommended that any major development that would impact the SR 198/SR 43 Interchange be required to develop a Traffic Impact Study (TIS) or Project Study Report (PSR). It is further recommended that we review the scope of any TIS prior to work commencing on the preparation

of the study. The study should be prepared in accordance with the State's guidelines for preparing traffic studies dated June, 2001. The scope needs to be sent to Caltrans before the TIS is conducted

The scope for the traffic circulation element of the GPA needs to be forwarded to Caltrans for review and comment.

Please be advised that any future development adjacent to a State Route, whether the entitlement is deemed by the lead agency to be discretionary or ministerial, should be sent to Caltrans for review. Also, please send a response to our comments and a copy of the Council resolution related to the proposed project. If you have any questions, please call me at (559) 488-7306.

Sincerely,

Al Dias
Office of Transportation Planning
District 6

C: Mr. Thomas Skinner

COUNTY OF KINGS

DEPARTMENT OF PUBLIC HEALTH
DIVISION OF ENVIRONMENTAL HEALTH SERVICES

KEITH WINKLER, REHS
DIRECTOR
Kwinkler@co.kings.ca.us

330 Campus Drive Hanford, CA 93230 (559) 584-1411 (559) 584-9040 FAX
Internet: http://countyofkings.com/health/ehs/

February 13, 2002

Hanford Community Development Department
Attn: Jim Beath
317 North Douty St.
Hanford, CA 93230

SUBJ.: KINGS COUNTY HEALTH DEPARTMENT – EHS COMMENTS
NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT

Thank you for the opportunity to comment on the above noted proposed project. As the City of Hanford will be updating the it's General Plan in the near future as it pertains to land use, recreation, public facilities & services, etc., it is essential to maintain a working relationship with the Kings County Health Department's Division of Environmental Health Services (KCEHS) for updated information on regulatory requirements as they pertain to both private and public businesses. The Heath Department has particular interest in the following projects as they relate to KCEHS Program oversight:

1. Food facility construction plan checks approval and food vending/service permitting.
2. Public swimming pool construction including construction plan check approval and registration.
3. Public water supply system(s) status for permitting and oversight for those systems with less than 200 service connections.
4. The storage of hazardous chemicals for business that store at least 55 gallons, 500 lbs., or 200 $ft.^3$ of a compressed gas.
5. Industrial development as it relates to businesses that store acutely hazardous chemicals that can pose exposure hazards to offsite endpoints with particular emphasis to sensitive receptors. Facilities that store acutely hazardous chemicals must either develop Risk Management Plans (RMP) per federal regulations or California Accidental Release Prevention (CalARP) plan. Compliance with either program is dependent on the type of material identified as being acutely hazardous and/or the volume of the material stored onsite. An operator of a business that must comply with either of the programs must submit a copy of the plan to KCEHS prior to beginning the operation.

If should you have any questions regarding our comments, please feel free to contact me at (559) 584-1411.

Sincerely,

Luis Flores, REHS
Environmental Health Officer IV

H:\planning\city of hanford\draft EIR

California Regional Water Quality Control Board

Central Valley Region

Robert Schneider, Chair

Winston H. Hickox
Secretary for Environmental Protection

Gray Davis
Governor

Fresno Branch Office
Internet Address: http://www.swrcb.ca.gov/~rwqcb5
3614 East Ashlan Avenue, Fresno, California 93726
Phone (559) 445-5116 • FAX (559) 445-5910

RECEIVED
MAR 01 2002
CITY OF HANFORD
COMMUNITY DEVELOPMENT DEPT

Mr. Jim Beath
City of Hanford
317 North Douty Street
Hanford, CA 93230

27 February 2002

NOTICE OF PREPARATION TO PREPARE AN EIR, CITY OF HANFORD (SCH# 2002021036), KINGS COUNTY

We reviewed the City's notice of preparation (NOP) to prepare an environmental impact report (EIR) for updating the City of Hanford's General Plan. The City last updated its General Plan in 1994. The NOP indicates that the proposed updated General Plan will encompass an additional 125 acres and address issues such as land use, circulation, hazards management, open space, conservation and recreation, and public facilities and services. To facilitate our review of the General Plan update, we recommend that it (1) discuss the extent to which, if any, proposed changes in land use may adversely affect water quality, and (2) include an estimate of population growth and an examination of whether the City's wastewater treatment facility can accommodate additional wastewater from domestic and industrial sources. We request to receive copies of the Draft documents of the General Plan (see enclosure).

If construction activities related to projects considered in the updated General Plan will disturb more than five acres, compliance with the National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002 for discharges of storm water associated with construction activity will be required. If applicable, the proponent of such projects must submit a Notice of Intent to the State Water Resources Control Board and prepare a Storm Water Pollution Prevention Plan before construction begins. If development will impact jurisdictional wetlands, the proponent must obtain water quality certification for development activities that will fill wetlands, in accordance with section 401 of the Clean Water Act.

Should you have any questions concerning the above, please contact Robert Schlipf at (559) 445-5140.

Jo Anne Kipps

JO ANNE KIPPS
Senior Engineer
RCE No. 49278

Enclosure

cc w/out enclosure: Scott Morgan, State Clearinghouse, Sacramento

RAS:Hanford WWTF..generalplan.2.7.2002
N15 /CITY OF HANFORD/WWTF /SD160103001/E

STATE OF CALIFORNIA Gray Davis, Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
(916) 657-5390 - Fax

February 28, 2002

Jim Beath
City of Hanford
317 North Douty Street
Hanford, CA 93230

RE: SCH# 2002021036 – City of Hanford General Plan

Dear Mr. Beath:

The Native American Heritage Commission has reviewed the above mentioned NOP. To adequately assess and mitigate project-related impacts on archaeological resources, the Commission recommends the following actions be required:

- ✓ Contact the appropriate Information Center for a record search. The record search will determine:
  - If a part or all of the area of project effect (APE) has been previously surveyed for cultural resources.
  - If any known cultural resources have already been recorded on or adjacent to the APE.
  - If the probability is low, moderate, or high that cultural resources are located in the APE.
  - If a survey is required to determine whether previously unrecorded cultural resources are present.
- ✓ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
  - The final report containing site forms, site significance, and mitigation measurers should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure.
  - The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.
- ✓ Contact the Native American Heritage Commission for:
  - A Sacred Lands File Check.
  - A list of appropriate Native American Contacts for consultation concerning the project site and to assist in the mitigation measures.
- ✓ Lack of surface evidence of archeological resources does not preclude their subsurface existence.
  - Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5 (f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
  - Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.
  - Lead agencies should include provisions for discovery of Native American human remains in their mitigation plan. Health and Safety Code §7050.5, CEQA §15064.5 (e), and Public Resources Code §5097.98 mandates the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

Sincerely,

Rob Wood

Rob Wood
Environmental Specialist III
(916) 653-4040

CC: State Clearinghouse

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846

IN REPLY REFER TO:
PPN 1457

February 27, 2002

RECEIVED
FEB 28 2002
CITY OF HANFORD
COMMUNITY DEVELOPMENT DEPT

Mr. Jim Beath
City of Hanford
Planning Department
317 North Douty Street
Hanford, California 93230

Dear Mr. Beath:

Thank you for the opportunity to review the Notice of Preparation for a Draft Environmental Impact Report (DEIR) for the General Plan Update, City of Hanford, Kings County, California. The enclosures are intended to assist you in your continued environmental review of this proposal. Future consultation with the U.S. Fish and Wildlife Service (Service) may be required under the Fish and Wildlife Coordination Act if project activities are anticipated to impact jurisdictional wetlands, and/or the Endangered Species Act if project activities are anticipated to affect federally listed species.

Enclosure A provides a list of sensitive species that may occur in or near the project site. The Service recommends that surveys be completed by a qualified biologist on the proposed project site to confirm the presence or absence of special-status species or their habitats. Enclosure B recommends general guidelines for identifying and mitigating project impacts to fish, wildlife, and their habitats. The Council on Environmental Quality developed regulations for implementing the National Environmental Policy Act, and defines mitigation to include: (1) avoiding the impact; (2) minimizing the impact; (3) rectifying the impact; (4) reducing or eliminating the impact over time; and (5) compensating for impacts. The Service supports and adopts this definition of mitigation and considers the specific elements to represent the desirable sequence of steps in the mitigation planning process. Accordingly, we maintain the best way to mitigate adverse biological impacts is avoidance when at all possible.

We encourage you to use these guidelines to develop a comprehensive environmental document that addresses these needs. If you have any questions regarding these comments, please contact Larry Butcher in the Watershed Planning Branch at (916) 414-6583.

Sincerely,

Michael B. Hoover
Acting Field Supervisor

Enclosures

cc:
AES, Portland, OR
RM, CDFG, Region 4, Fresno, CA (w/o enclosures)

ENCLOSURE A

Endangered and Threatened Species that May Occur In
or be Affected by Projects in the Selected Quads Listed Below
Reference File No. 1-1-02-SP-0987
City of Hanford General Plan
February 22, 2002

QUAD: 335C HANFORD

Listed Species

Mammals

Fresno kangaroo rat, *Dipodomys nitratoides exilis* (E)

Tipton kangaroo rat, *Dipodomys nitratoides nitratoides* (E)

San Joaquin kit fox, *Vulpes macrotis mutica* (E)

Birds

bald eagle, *Haliaeetus leucocephalus* (T)

Reptiles

blunt-nosed leopard lizard, *Gambelia (=Crotaphytus) silla* (E)

giant garter snake, *Thamnophis gigas* (T)

Amphibians

California red-legged frog, *Rana aurora draytonii* (T)

Fish

delta smelt, *Hypomesus transpacificus* (T)

Sacramento splittail, *Pogonichthys macrolepidotus* (T)

Invertebrates

vernal pool fairy shrimp, *Branchinecta lynchi* (T)

valley elderberry longhorn beetle, *Desmocerus californicus dimorphus* (T)

vernal pool tadpole shrimp, *Lepidurus packardi* (E)

Proposed Species

Birds

mountain plover, *Charadrius montanus* (PT)

Species of Concern

Mammals

San Joaquin (=Nelson's) antelope squirrel, *Ammospermophilus nelsoni* (CA)

Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)

greater western mastiff-bat, *Eumops perotis californicus* (SC)

small-footed myotis bat, *Myotis ciliolabrum* (SC)

long-legged myotis bat, *Myotis volans* (SC)

Yuma myotis bat, *Myotis yumanensis* (SC)

Tulare grasshopper mouse, *Onychomys torridus tularensis* (SC)
San Joaquin pocket mouse, *Perognathus inornatus* (SC)

Birds

tricolored blackbird, *Agelaius tricolor* (SC)
grasshopper sparrow, *Ammodramus savannarum* (SC)
short-eared owl, *Asio flammeus* (SC)
western burrowing owl, *Athene cunicularia hypugaea* (SC)
Aleutian Canada goose, *Branta canadensis leucoparela* (D)
Swainson's hawk, *Buteo Swainsoni* (CA)
ferruginous hawk, *Buteo regalis* (SC)
Costa's hummingbird, *Calypte costae* (SC)
Lawrence's goldfinch, *Carduelis lawrencei* (SC)
Vaux's swift, *Chaetura vauxi* (SC)
black tern, *Chlidonias niger* (SC)
white-tailed (=black shouldered) kite, *Elanus leucurus* (SC)
little willow flycatcher, *Empidonax traillii brewsteri* (CA)
greater sandhill crane, *Grus canadensis tabida* (CA)
loggerhead shrike, *Lanius ludovicianus* (SC)
Lewis' woodpecker, *Melanerpes lewis* (SC)
long-billed curlew, *Numenius americanus* (SC)
Nuttall's woodpecker, *Picoides nuttallii* (SLC)
white-faced ibis, *Plegadis chihi* (SC)
rufous hummingbird, *Selasphorus rufus* (SC)

Reptiles

northwestern pond turtle, *Clemmys marmorata marmorata* (SC)
southwestern pond turtle, *Clemmys marmorata pallida* (SC)
California horned lizard, *Phrynosoma coronatum frontale* (SC)

Amphibians

western spadefoot toad, *Spea hammondii* (SC)

Fish

longfin smelt, *Spirinchus thaleichthys* (SC)

Invertebrates

California linderiella fairy shrimp, *Linderiella occidentalis* (SC)
molestan blister beetle, *Lytta molesta* (SC)

QUAD: 335D REMNOY

Listed Species

Mammals

Fresno kangaroo rat, *Dipodomys nitratoides exilis* (E)

Tipton kangaroo rat, *Dipodomys nitratoides nitratoides* (E)

San Joaquin kit fox, *Vulpes macrotis mutica* (E)

Birds

bald eagle, *Haliaeetus leucocephalus* (T)

Reptiles

blunt-nosed leopard lizard, *Gambelia (=Crotaphytus) silla* (E)

giant garter snake, *Thamnophis gigas* (T)

Amphibians

California red-legged frog, *Rana aurora draytonii* (T)

Fish

delta smelt, *Hypomesus transpacificus* (T)

Sacramento splittail, *Pogonichthys macrolepidotus* (T)

Invertebrates

vernal pool fairy shrimp, *Branchinecta lynchi* (T)

valley elderberry longhorn beetle, *Desmocerus californicus dimorphus* (T)

vernal pool tadpole shrimp, *Lepidurus packardi* (E)

Proposed Species

Birds

mountain plover, *Charadrius montanus* (PT)

Candidate Species

Amphibians

California tiger salamander, *Ambystoma californiense* (C)

Species of Concern

Mammals

San Joaquin (=Nelson's) antelope squirrel, *Ammospermophilus nelsoni* (CA)

Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)

greater western mastiff-bat, *Eumops perotis californicus* (SC)

small-footed myotis bat, *Myotis ciliolabrum* (SC)

long-legged myotis bat, *Myotis volans* (SC)

Yuma myotis bat, *Myotis yumanensis* (SC)

Tulare grasshopper mouse, *Onychomys torridus tularensis* (SC)

San Joaquin pocket mouse, *Perognathus inornatus* (SC)

Birds

- tricolored blackbird, *Agelaius tricolor* (SC)
- grasshopper sparrow, *Ammodramus savannarum* (SC)
- short-eared owl, *Asio flammeus* (SC)
- western burrowing owl, *Athene cunicularia hypugaea* (SC)
- Aleutian Canada goose, *Branta canadensis leucopareia* (D)
- Swainson's hawk, *Buteo Swainsoni* (CA)
- ferruginous hawk, *Buteo regalis* (SC)
- Costa's hummingbird, *Calypte costae* (SC)
- Lawrence's goldfinch, *Carduelis lawrencei* (SC)
- Vaux's swift, *Chaetura vauxi* (SC)
- black tern, *Chlidonias niger* (SC)
- white-tailed (=black shouldered) kite, *Elanus leucurus* (SC)
- little willow flycatcher, *Empidonax traillii brewsteri* (CA)
- greater sandhill crane, *Grus canadensis tabida* (CA)
- loggerhead shrike, *Lanius ludovicianus* (SC)
- Lewis' woodpecker, *Melanerpes lewis* (SC)
- long-billed curlew, *Numenius americanus* (SC)
- Nuttall's woodpecker, *Picoides nuttallii* (SLC)
- white-faced ibis, *Plegadis chihi* (SC)
- rufous hummingbird, *Selasphorus rufus* (SC)
- Brewer's sparrow, *Spizella breweri* (SC)

Reptiles

- northwestern pond turtle, *Clemmys marmorata marmorata* (SC)
- southwestern pond turtle, *Clemmys marmorata pallida* (SC)
- California horned lizard, *Phrynosoma coronatum frontale* (SC)

Amphibians

- western spadefoot toad, *Spea hammondii* (SC)

Fish

- longfin smelt, *Spirinchus thaleichthys* (SC)

Invertebrates

- California linderiella fairy shrimp, *Linderiella occidentalis* (SC)
- molestan blister beetle, *Lytta molesta* (SC)

Endangered and Threatened Species that May Occur in or be Affected by
Projects in the Area of the Following California Counties
Reference File No. 1-1-02-SP-0987
February 21, 2002

KINGS COUNTY

Listed Species

Mammals

Fresno kangaroo rat, *Dipodomys nitratoides exilis* (E)
San Joaquin kit fox, *Vulpes macrotis mutica* (E)
Tipton kangaroo rat, *Dipodomys nitratoides nitratoides* (E)
giant kangaroo rat, *Dipodomys ingens* (E)

Birds

California condor, *Gymnogyps californianus* (E)
bald eagle, *Haliaeetus leucocephalus* (T)

Reptiles

blunt-nosed leopard lizard, *Gambelia (=Crotaphytus) sila* (E)
giant garter snake, *Thamnophis gigas* (T)

Amphibians

California red-legged frog, *Rana aurora draytonii* (T)

Fish

Sacramento splittail, *Pogonichthys macrolepidotus* (T)
delta smelt, *Hypomesus transpacificus* (T) *

Invertebrates

valley elderberry longhorn beetle, *Desmocerus californicus dimorphus* (T)
vernal pool fairy shrimp, *Branchinecta lynchi* (T)
vernal pool tadpole shrimp, *Lepidurus packardi* (E)

Plants

California jewelflower, *Caulanthus californicus* (E) *
Hoover's eriastrum (= woolly-star), *Eriastrum hooveri* (T)
San Joaquin woolly-threads, *Monolopia congdonii (=Lembertia congdonii)* (E)

Proposed Species

Birds

mountain plover, *Charadrius montanus* (PT)

Candidate Species

Birds

Western yellow-billed cuckoo, *Coccyzus americanus occidentalis* (C) *

Amphibians

California tiger salamander, *Ambystoma californiense* (C)

Species of Concern

Mammals

Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)
San Joaquin (=Nelson's) antelope squirrel, *Ammospermophilus nelsoni* (CA)
San Joaquin pocket mouse, *Perognathus inornatus* (SC)
Southern grasshopper mouse, *Onychomys torridus ramona* (SC)
Tulare grasshopper mouse, *Onychomys torridus tularensis* (SC)
Yuma myotis bat, *Myotis yumanensis* (SC)
fringed myotis bat, *Myotis thysanodes* (SC)
greater western mastiff-bat, *Eumops perotis californicus* (SC)
long-eared myotis bat, *Myotis evotis* (SC)
long-legged myotis bat, *Myotis volans* (SC)
short-nosed kangaroo rat, *Dipodomys nitratoides brevinasus* (SC)
small-footed myotis bat, *Myotis ciliolabrum* (SC)

Birds

Aleutian Canada goose, *Branta canadensis leucoparela* (D)
American bittern, *Botaurus lentiginosus* (SC)
American peregrine falcon, *Falco peregrinus anatum* (D)
Bell's sage sparrow, *Amphispiza belli belli* (SC)
California thrasher, *Toxostoma redivivum* (SC)
Costa's hummingbird, *Calypte costae* (SC)
Lawrence's goldfinch, *Carduelis lawrencei* (SC)
San Joaquin LeConte's thrasher, *Toxostoma lecontei macmillanorum* (SC)
Snowy Egret, *Egretta thula* (MB)
Swainson's hawk, *Buteo Swainsoni* (CA)
Vaux's swift, *Chaetura vauxi* (SC)
bank swallow, *Riparia riparia* (CA)
common loon, *Gavia immer* (SC)
ferruginous hawk, *Buteo regalis* (SC)
grasshopper sparrow, *Ammodramus savannarum* (SC)
greater sandhill crane, *Grus canadensis tabida* (CA)
least bittern, western, *Ixobrychus exilis hesperis* (SC)
little willow flycatcher, *Empidonax traillii brewsteri* (CA)
loggerhead shrike, *Lanius ludovicianus* (SC)
long-billed curlew, *Numenius americanus* (SC)

rufous hummingbird, *Selasphorus rufus* (SC)
short-eared owl, *Asio flammeus* (SC)
tricolored blackbird, *Agelaius tricolor* (SC)
western burrowing owl, *Athene cunicularia hypugaea* (SC)
white-faced ibis, *Plegadis chihi* (SC)
white-tailed (=black shouldered) kite, *Elanus leucurus* (SC)

Reptiles

California horned lizard, *Phrynosoma coronatum frontale* (SC)
San Joaquin coachwhip (=whipsnake), *Masticophis flagellum ruddocki* (SC)
northwestern pond turtle, *Clemmys marmorata marmorata* (SC)
silvery legless lizard, *Anniella pulchra pulchra* (SC)
southwestern pond turtle, *Clemmys marmorata pallida* (SC)

Amphibians

foothill yellow-legged frog, *Rana boylii* (SC)
western spadefoot toad, *Spea hammondii* (SC)

Fish

Kern brook lamprey, *Lampetra hubbsi* (SC)

Invertebrates

California linderiella fairy shrimp, *Linderiella occidentalis* (SC)
Ciervo aegialian scarab beetle, *Aegialia concinna* (SC)
Doyen's trigonascuta dune weevil, *Trigonoscuta doyeni* (SC)
San Joaquin dune beetle, *Coelus gracilis* (SC)
molestan blister beetle, *Lytta molesta* (SC)

Plants

King's gold, *Twisselmannia californica* (SC)
Lost Hills saltbush (=crownscale), *Atriplex vallicola* (SC)
cottony buckwheat, *Eriogonum gossypinum* (SLC)
forked fiddleneck, *Amsinckia vernicosa var. furcata* (SLC)
heartscale, *Atriplex cordulata* (SC)
pale-yellow layia, *Layia heterotricha* (SC) *
recurved larkspur, *Delphinium recurvatum* (SC)
slough thistle, *Cirsium crassicaule* (SC)

KEY:

(E)	*Endangered*	Listed (in the Federal Register) as being in danger of extinction.
(T)	*Threatened*	Listed as likely to become endangered within the foreseeable future.
(P)	*Proposed*	Officially proposed (in the Federal Register) for listing as endangered or threatened.
(PX)	*Proposed Critical Habitat*	Proposed as an area essential to the conservation of the species.
(C)	*Candidate*	Candidate to become a *proposed* species.
(SC)	*Species of Concern*	Other species of concern to the Service.
(SLC)	*Species of Local Concern*	Species of local or regional concern or conservation significance.
(D)	*Delisted*	Delisted. Status to be monitored for 5 years.
(CA)	*State-Listed*	Listed as threatened or endangered by the State of California.
NMFS	NMFS species	Under jurisdiction of the National Marine Fisheries Service. Contact them directly.
*	*Extirpated*	Possibly extirpated from the area.
**	*Extinct*	Possibly extinct
	Critical Habitat	Area essential to the conservation of a species.

ENCLOSURE B

The goal of the U.S. Fish and Wildlife Service is to conserve, protect and enhance fish, wildlife, and their habitats by timely and effective provision of fish and wildlife information and recommendations. To assist us in accomplishing this goal, we would like to see the items described below discussed in your environmental documents for the proposed project.

Project Description. The document should very clearly state the purposes of, and document the needs for, the proposed project so that the capabilities of the various alternatives to meet the purposes and needs can be readily determined.

A thorough description of all permanent and temporary facilities to be constructed and work to be done as a part of the project should be included. The document should identify any new access roads, equipment staging areas, and gravel processing facilities which are needed. Figures accurately depicting proposed project features in relation to natural features (such as streams, wetlands, riparian areas, and other habitat types) in the project area should be included.

Affected Environment. The document should show the location of, and describe, all vegetative cover types in the areas potentially affected by all project alternatives and associated activities. Tables with acreages of each cover type with and without the project for each alternative would also be appropriate. We recommend that all wetlands in the project area be delineated and described according to the classification system found in the Service's Classification of Wetlands and Deepwater Habitats of the United States (Cowardin 1979). The Service's National Wetland Inventory maps would be one starting point for this effort.

The document should present and analyze a full range of alternatives to the proposed project. At least one alternative should be designed to avoid all impacts to wetlands, including riparian areas. Similarly, within each alternative, measures to minimize or avoid impacts to wetlands should be included.

Lists of fish and wildlife species expected to occur in the project area should be in the document. The lists should also indicate for each species whether or not it is a resident or migrant, and the period(s) of the year it would be expected in the project area.

Environmental Consequences. The sections on impacts to fish and wildlife should discuss impacts from vegetation removal (both permanent and temporary), filling or degradation of wetlands, interruption of wildlife migration corridors, and disturbance from trucks and other machinery during construction and/or operation. These sections should also analyze possible impacts to streams from construction of outfall structures, pipeline crossings, and filling. Impacts on water quality, including nutrient loading, sedimentation, toxics, biological oxygen demand, and temperature in receiving waters should also be discussed in detail along with the resultant effects on fish and aquatic invertebrates. Discussion of indirect impacts to fish, wildlife, and their habitats, including impacts from growth induced by the proposed project, should also be addressed in the document. The impacts of each alternative should be discussed in sufficient detail to allow comparison between the alternatives.

The cumulative impacts of the project, when viewed in conjunction with other past, existing, and foreseeable projects, need to be addressed. Cumulative impacts to fish, wildlife, wetlands and other habitats, and water quality should be included.

Mitigation Planning. Under provisions of the Fish and Wildlife Coordination Act, the Service advises the U.S. Army Corps of Engineers on projects involving dredge and fill activities in "waters of the United States", of which wetlands and some riparian habitats are subcategories. Since portions of this proposal may ultimately require a Corps permit, the Service will subsequently be involved under the Coordination Act. Therefore, if you have not done so already, we suggest that you or your representative consult the Corps regarding onsite wetlands and related habitats that may fall under their jurisdiction, and include this information in the draft document. When reviewing Corps public notices, the Service generally does not object to projects meeting the following criteria:

1. They are ecologically sound;

2. The least environmentally damaging reasonable alternative is selected;

3. Every reasonable effort is made to avoid or minimize damage or loss of fish and wildlife resources and uses;

4. All important recommended means and measures have been adopted, with guaranteed implementation to satisfactorily compensate for unavoidable damage or loss consistent with the appropriate mitigation goal; and

5. For wetlands and shallow water habitats, the proposed activity is clearly water dependent and there is a demonstrated public need.

The Service may recommend the "no project" alternative for those projects which do not meet all of the above criteria, and where there is likely to be a significant fish and wildlife resource loss.

When projects impacting waterways or wetlands are deemed acceptable to the Service, we recommend full mitigation for any impacts to fish and wildlife. The Council on Environmental Quality regulations for implementing the National Environmental Policy Act define mitigation to include: 1) Avoiding the impact; 2) minimizing the impact; 3) rectifying the impact; 4) reducing or eliminating the impact over time; and 5) compensating for impacts. The Service supports and adopts this definition of mitigation and considers the specific elements to represent the desirable sequence of steps in the mitigation planning process. Accordingly, we maintain that the best way to mitigate for adverse biological impacts is to avoid them altogether.

The document should describe all measures proposed to avoid, minimize, or compensate for impacts to fish and wildlife and their habitats. The measures should be presented in as much detail as possible to allow us to evaluate their probable effectiveness.

Because of their very high value to migratory birds, and their ever-increasing scarcity in California, our mitigation goal for wetlands (including riparian and riverine wetlands) is no net loss of in-kind habitat value or acreage (whichever is greater).

For unavoidable impacts, to determine the mitigation credits available for a given mitigation project, we evaluate what conditions would exist on the mitigation site in the future in the absence of the mitigation actions, and compare those conditions to the conditions we would expect to develop on the site with implementation of the mitigation plan.

Mitigation habitat should be equal to or exceed the quality of the habitat to be affected by the project. Baseline information would need to be gathered at the impact site to be able to quantify this goal in terms of plant species diversity, shrub and tree canopy cover, stems/acre, tree height, etc. The ultimate success of the project should be judged according to these same measurements at the mitigation site.

Criteria should be developed for assessing the progress of the project during its developmental stages as well. Assessment criteria should include rates of plant growth, plant health, and evidence of natural reproduction. Success criteria should be geared toward equaling or exceeding the quality of the highest quality habitat to be affected. In other words, the mitigation effort would be deemed a success in relation to this goal if the mitigation site met or exceeded habitat measurements at a "model" site (plant cover, density, species diversity, etc.).

The plan should present the proposed ground elevations at the mitigation site, along with elevations in the adjacent areas. A comparison of the soils of the proposed mitigation and adjacent areas should also be included in the plan, and a determination made as to the suitability of the soils to support habitats consistent with the mitigation goals.

Because wetland ecosystems are driven by suitable hydrological conditions, additional information must be developed on the predicted hydrology of the mitigation site. The plan should describe the depth of the water table, and the frequency, duration, areal extent, and depth of flooding which would occur on the site. The hydrologic information should include an analysis of extreme conditions (drought, flooding) as well as typical conditions.

The plan must include a timeframe for implementing the mitigation in relation to the proposed project. We recommend that mitigation be initiated prior to the onset of construction. If there will be a substantial time lag between project construction and completion of the mitigation, a net loss of habitat values would result, and more mitigation would be required to offset this loss.

Generally, monitoring of the mitigation site should occur annually for at least the first five years, biennially for years 6 through 11, and every five years thereafter until the mitigation has met all success criteria. Remediation efforts and additional monitoring should occur if success criteria are not met during the first five years. Some projects will require monitoring throughout the life of the project. Reports should be prepared after each monitoring session.

The plan should require the preparation of "as-built" plans. Such plans provide valuable information, especially if the mitigation effort fails. Similarly, a "time-zero" report should be mandated. This report would describe exactly what was done during the construction of the mitigation project, what problems were encountered, and what corrections or modifications to the plans were undertaken.

The plan should detail how the site is to be maintained during the mitigation establishment period, and how long the establishment period will be. It will also be important to note what entity will perform the maintenance activities, and what entity will ultimately own and manage the site. In addition, a mechanism to fund the maintenance and management of the site should be established and identified. A permanent easement should be placed on the property used for the mitigation that would preclude incompatible activities on the site in perpetuity.

Finally, in some cases, a performance bond may be required as part of the mitigation plan. The amount of the bond should be sufficient to cover the costs of designing and implementing an adequate mitigation plan (and purchasing land if needed) should the proposed plan not succeed.

Reference

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. FWS/OBS-79/31. U.S. Fish and Wildlife Service, Washington, D.C. 103 pp.

San Joaquin Valley
Air Pollution Control District

20020043

March 11, 2002

Attn: Jim Beath
City of Hanford
317 North Douty Street
Hanford, CA 93230

RE: City of Hanford General Plan Update

Dear Jim Beath:

The San Joaquin Valley Unified Air Pollution Control District (District) has reviewed the Documentation provided and has the following comments:

The entire San Joaquin Valley is non-attainment for ozone and fine particulate matter (PM-10). The Federal Clean Air Act (CAA) and the California Clean Air Act require areas that are designated non-attainment to reduce emissions until standards are met. A concerted effort should be made to improve air quality. The District recommends referring to the Air Quality Guidelines for General Plans handbook. We can furnish your agency with a copy if needed.

The following items are rules that have been adopted by the District to reduce emissions throughout the San Joaquin Valley, and are required:

1. District Rules 4901 and 4902 regulate the sale, installation and transfer of both wood-burning devices and natural gas-fired water heaters to limit the emissions of PM-10 and oxides of nitrogen. A synopsis highlighting many of the requirements of these regulations has been enclosed.

2. District Regulation VIII - Fugitive Dust Rules is a series of rules designed to reduce PM-10 emissions generated by human activity, including construction, road building, bulk materials storage, landfill operations, etc. A synopsis highlighting many of the requirements of this regulation has been enclosed.

There are a number of measures that can be incorporated into your General Plan Update to reduce the overall level of emissions from future projects. (Note: Some of these measures may already exist as City development standards. All other measures should be implemented to the fullest extent possible.) This list should not be considered all-inclusive. The District encourages innovation in measures to reduce air quality impacts.

David L. Crow
Executive Director/Air Pollution Control Officer

Northern Region Office
4230 Kiernan Avenue, Suite 130
Modesto, CA 95356-9322
(209) 557-6400 ◆ FAX (209) 557-6475

Central Region Office
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
(559) 230-6000 ◆ FAX (559) 230-6061

Southern Region Office
2700 M Street, Suite 275
Bakersfield, CA 93301-2370
(661) 326-6900 ◆ FAX (661) 326-6985

- Limit engine idling by construction/earth moving equipment and trucks during construction activities;

- Require off-road mobile equipment to be equipped with catalysts/particulate traps to reduce particulate emissions. These catalysts/traps require the use of ultra-low sulfur diesel fuel (15 ppm). Currently, California Air Resources Board (ARB) has verified a limited number of devices that reduce particulate emissions for installation in several diesel engine families. Devices that reduce both NOx and particulate emissions are not yet certified for sale in California; however, the County should follow progress on this technology to determine availability at the time closure activities commence;

- Energy efficient design including but not limited to; automated control system for heating/air conditioning and energy efficiency beyond Title 24 requirements, lighting controls and energy-efficient lighting in buildings, increased insulation beyond Title 24 requirements, and light colored roof materials to reflect heat;

- Allow only low-emitting EPA-certified fireplace inserts and/or wood stoves or natural gas to be built into new construction;

- Deciduous trees should be carefully selected and located on southern and western exposures to shade the Buildings during the summer months while allowing the sun to get through during the winter months;

- Housing units should be oriented to maximize passive solar cooling and heating when practicable;

- Electric, solar or low nitrogen oxide (NOx) emitting gas-fired water heaters should be installed;

- Any gas-fired appliances should be low nitrogen oxide (NOx) emitting gas-fired appliances complying with California NOx Emission Rule #1121;

- Natural gas lines and electrical outlets should be installed in backyard or patio areas to encourage the use of gas and/or electric barbecues;

- Electrical outlets should be installed around the exterior of the units to encourage the use of electric landscape maintenance equipment;

- Sidewalks and bikeways should be installed throughout as much of a project as possible and should be connected to any nearby open space areas, parks, schools, commercial areas, etc. to encourage walking and bicycling;

- Low or non-polluting incentives items should be provided with the purchase of each residential unit. Such items could include electric lawn mowers or gas or electric barbecues.

Thank you for the opportunity to comment. If you have any further questions or concerns, please feel free to contact me at (661) 326-6980.

Sincerely,

Heather Ellison
Air Quality Planner

Enclosures

SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT
Rule 4901 and 4902 Synopsis

Rule 4901 Residential Wood Burning (Adopted July 15, 1993)		
Section	**Applicability**	**Requirements / Implementation**
2.0	Applicability:	This rule applies to any person who manufactures, sells, offers for sale, or operates a solid fuel-burning device. (For the purpose of this regulation solid fuel burning device is defined as: any fireplace of wood heater that burns wood, coal, or any other nongaseous or non-liquid fuels, or any similar device burning any solid fuel, used for aesthetic or space-heating purposes in a private residence or commercial establishment, which has a heat input less than one million British thermal units (BTU'S) per hour.
4.0	Exemptions:	Pellet-fueled wood heaters shall be exempt from provisions of section 5.1: Solid fuel burning devices sold as appurtenances to real property in an escrow transaction shall be exempt from the provision of 5.2.
5.1	Sale, supply, installation, or transfer of a new wood heater	None of these actions shall be taken unless the wood heater meets EPA's Phase II emission and performance requirements set forth in, Part 60, Title 40, Subpart AAA Code of Federal Regulations.
5.2	Advertising, sale, supply, installation, or transfer of a used wood heater	Shall not be done unless it has been rendered permanently inoperable, or unless it is either: EPA-certified, Oregon-certified, or a pellet-fueled wood heater.
Rule 4902 Residential Water Heaters (Adopted June 17, 1993)		
1.0	Applicability:	This rule applies to residential natural gas-fired water heaters.
3.0	Exemptions:	Natural gas-fired water heaters with rated heat input of greater than 75,000 BTU's per hour; water heaters using fuels other than natural gas; and natural gas-fired heaters used exclusively to heat swimming pools or hot tubs.
4.1	Natural Gas-Fired Water Heaters with a rated heat input of less than or equal to 75,000 BTU/hour	No Person Shall Sell, install or offer for sale within the District any natural gas-fired water heater manufactured after December 1993 that emits more than 40 nanograms of nitrogen oxides (calculated as NO_2) per Joule of heat output.
4.2	Certification of water heaters	Water heaters subject to section 4.1 of this rule shall be certified in accordance with the EPA Reference Test Method 7E, 40 CFR, Part 60, Appendix A.
5.1	Operation of water heaters	In accordance with Section2.4 of the American National Standards ANSI Z21.10.1-1990: at normal test pressure, input rates, and with a five-foot exhaust stack installed during the nitrogen oxide emission test.
5.2	Certification	The manufacturer shall demonstrate that each water heater model subject to the requirements of section 4.1 has been tested in accordance with EPA Reference Test Method 7E, 40 CFR Part 60, Appendix A.
5.3	Compliance statement	Upon request of the APCO, each manufacturer shall submit a statement certifying that water heaters subject to this rule are in compliance with the provisions of section 4.1.

For additional information please contact the compliance division of your nearest District regional office:

Northern Region
4230 Kiernan Avenue, Suite 130
Modesto, CA 95356-9321
(209) 557-6400

Central Region
1990 East Gettysburg Ave.
Fresno, CA 93726
(559) 230-5950

Southern Region
2700 M Street, Suite 275
Bakersfield, CA 93301-2307
(661) 326-6900

SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT

Regulation VIII Fugitive Dust/PM-10 Synopsis

Rule 8010 Administrative Requirements

Section	Applicability	Requirements/Implementation
2.0	*Applicability:* This regulation applies to specified outdoor man-made sources of fugitive dust for the purpose of attaining health-based standards for fine particulate matter (PM-10). [For the purpose of this regulation, visible dust emissions (VDE) is defined as: visible dust of such opacity as to obscure an observer's view to a degree equal to or greater than an opacity of 40%, for a period or periods aggregating more than three minutes in any one hour, except as set forth in Rule 8030, 5.1.]	
4.0	*Exemptions: (All Regulation VIII Rules)* Actions required by law to protect the environment; current District permitted activities with PM-10 control measures greater than or equal to this regulation; public health & safety emergency operations lasting less than 30 days; vegetative reduction required by a Federal, State or local agency for fire prevention; and activities conducted above the elevation of 3000 feet (but not including reporting requirements specified in Rule 8060), or during freezing conditions.	
5.1	Chemical Stabilizing Agents.	Must meet ARB/EPA acceptability and air/water quality standards.
5.4	Dust Palliative and Asphalt Paving.	Shall comply with other applicable District Rules (i.e. Rule 4641).
5.5	Mud and Dirt Trackout.	Requirements in this regulation do not exempt owners/operators from other agencies' required permits for dirt and mud cleanup.

Rule 8020 Construction, Demolition, Excavation, Extraction

2.0	*Applicability:* Any construction, demolition, excavation, extraction, water mining related disturbances of soil, and the initial construction of landfills prior to commencement of landfill operations.	
4.0	*Exemptions:* Land preparation for agriculture, not including land preparation for construction of structures intended for agricultural use;; blasting activities; maintenance or remodeling activities when total building area is not increased more than 50% or 10,000 sq. ft. (but not including ancillary construction such as expanding parking lots); renovation of ground water recharge basins; activities approved prior to October 21, 1993; and solar drying & harvesting of sedimentary calcium carbonate precipitates. Compliance with Section 5.1 of this rule is not required where soil moisture or natural crusting is sufficient to limit VDE;.	
5.1	Land clearing, grubbing, scraping, excavation, land leveling, grading, cut & fill, and demolition activities.	Effective dust suppression utilizing water, presoaking, wetting agent, or other surfactant.
	Operation of wrecking balls or wrecking equipment.	All exterior surfaces of a building up to six stories in height shall be wetted during demolition. Materials resulting from razing or demolition shall be wetted during off-site removal.
5.2	All disturbed areas of a construction site, including storage piles, not used for seven or more days.	Effective stabilization to limit VDE (40%) by utilizing water, a chemical stabilizer/suppressant, or planting vegetative ground cover.
5.3	On-site unpaved roads and off-site unpaved access roads.	Effective control of fugitive dust to limit VDE (40%) by utilizing water or a chemical stabilizer/ suppressant.
5.4	Public paved roads, shoulders, and access ways adjacent to the site.	Limit or promptly remove any accumulation of mud or dirt at the end of work day or once every 24 hours. Recommend use of paved aprons, gravel strips, or wheel washers. The use of blower devices for the removal of accumulations is prohibited. The use of dry rotary brushes is prohibited, except where preceded or accompanied by wetting to limit dust emissions.

Rule 8030 Storage, Handling and Transport of Bulk Materials

2.0	*Applicability:* Outdoor handling/storage of bulk material emitting visible dust. Additional requirements may apply if compliance with this Rule requires the installation or modification of equipment under existing District permit.	
4.0	*Exemptions:* Conditions where moisture content of the material is sufficient to limit VDE; agricultural harvesting and open area drying of agricultural crop materials; timber harvesting and storage of logs; dust free materials; materials less than 250 cubic yards at a single site; and materials subject to damage by wetting.	
5.1	Transport of bulk materials in an outdoor area for a distance of twelve feet or greater with the use of a chute or conveyor device.	Chute/conveyer must be fully enclosed, or spray equipment wets materials to limit VDE (20% opacity) as defined in District Rule 4101-Visible Emissions, or materials conveyed are washed, separated, or screened to remove PM-10.
5.2	Materials transported by vehicle, except equipment on site adding to or removing from storage piles.	Limit or promptly remove any accumulation of mud or dirt at the end of work day or once every 24 hours. Wet material to limit VDE (40%), or provide at least six inches of freeboard space from the top of the transport container, or cover the container.
5.3	Outdoor storage of materials greater than 250 cubic yards.	Cover materials or stabilize to limit to VDE to 40% utilizing water, a chemical stabilizer/suppressant, or a vegetative cover within seven days after the addition or removal of materials.

Rule 8040 Landfills		
2.0	*Applicability:* All operational landfill sites, landfill closure activities, and activities conducted at closed landfill sites which disturb surface soils covering an area of more than one acre.	
5.1	Construction of a landfill site.	Requirements of District Rule 8020 and the California Code of Regulations (CCR) Sections 17016 and 18222 apply.
5.2	Adjacent public paved roads, shoulders & accesses.	Limit or promptly remove any accumulation of mud or dirt at the end of work day or once every 24 hours. Recommend use of paved aprons, gravel strips, or wheel washers. The use of blower devices for the removal of accumulations is prohibited. The use of dry rotary brushes is prohibited, except where preceded or accompanied by wetting to limit dust emissions.
5.2.1	Interior roads of the landfill site.	Landfill roads connected to off-site adjacent paved public roads must be paved for a sufficient distance to allow mud and dirt accumulation to drop off. Sufficient cleaning of interior roads to limit carry out onto the off-site public roads. The use of blower devices for removal of accumulations is prohibited. Use of dry rotary brushes is prohibited, except when preceded or accompanied by sufficient wetting.
5.4	Storage of construction vehicles, equipment, and materials.	Rule 8070 applies.
6.1	Report of Disposal Site Information (RDSI).	Keep a copy of RDSI at the landfill site or other site approved by District, for inspection by authorized District employees upon request.
Rule 8060 Paved and Unpaved Road		
2.0	*Applicability:* Any paved, or unpaved public or private road, street, highway, freeway, alley, way, access drive, access easement, or driveway **constructed or modified** after December 10, 1993. Road construction and repair activities are subject to requirements set forth in Rule 8020.	
4.0	*Exemptions:* Easements and roads providing access for not more than ten residences; paved roads less than three miles in length, and unpaved roads less than ½ mile in length; agricultural access roads; gated roads owned by a public agency, special district, or public utility on which public access is prohibited; road maintenance and resurfacing activities, not including reconstruction or modifications that add travel lanes or traffic capacity; and roads which have been approved, or for which construction bids have been awarded, prior to December 10, 1993.	
5.1.1	New construction, modifications, or approvals of paved roads with projected average daily vehicle trips of 500 vehicles or more.	Comply with American Association of State Highway and Transportation Officials (AASHTO) guidelines for the width of shoulders and median shoulders. Additional requirements, exemptions or alternative compliance measures may apply.
5.2	Construction and use of new unpaved roads or road segments (except where natural moisture is sufficient to limit VDE).	At least 50% of the length of the new unpaved road surface is controlled by application of chemical dust suppressant/stabilizer, or the entire unpaved surface is controlled by application of water at least one time per week as necessary, or at least 25% of the length of the new unpaved road is paved to provide a permanent stable surface.
6.1	Government Agencies with jurisdiction over publicly maintained paved roads open to public access.	Require preparation and submittal of a written report to the SJVUAPCD documenting compliance with the provisions of this Rule. Initial report prepared for the year 1994 and biennially thereafter. Additional requirements apply.
Rule 8070 Parking, Shipping, Receiving, Transfer, Fueling and Service Areas		
2.0	*Applicability:* All unpaved vehicle and/or equipment parking areas, fueling and service areas; and shipping, receiving, and transfer areas which are of one acre or larger in size.	
3.0	*Exemptions:* Activities described above which are conducted on sites less than one acre in size; agricultural activities, including storage, maintenance, and parking of agricultural equipment associated with those activities; temporary areas used for timber harvesting activities; and exposed surfaces of lake and river beds.	
4.1	On days the area is used (except where natural moisture is sufficient to limit VDE).	Application of either water at least once daily, a chemical dust suppressant/stabilizer in accordance with manufacturer's recommendations for road applications, or gravel to the entire surface.
4.2	Public paved roads, shoulders, and access ways adjacent to the site.	Limit or promptly remove any accumulation of mud or dirt at the end of work day or once every 24 hours. Recommend use of paved aprons, gravel strips, or wheel washers. The use of blower devices for the removal of accumulations is prohibited. The use of dry rotary brushes is prohibited, except where preceded or accompanied by wetting to limit dust emissions.

For additional information, please contact the Compliance Division of your nearest regional office:

Northern Region
4230 Kiernan Avenue, Suite 130
Modesto CA 95356-9321
(209) 557-6400

Central Region
1990 East Gettysburg Ave.
Fresno CA 93726
(559) 230-5950

Southern Region
2700 M Street, Suite 275
Bakersfield CA 93301-2370
(661) 326-6900

Mitigation Implementation and Monitoring Responsibility

Implementation: The City of Hanford Community Development Department through the Annexation, Subdivision Map, and project review processes shall be responsible for recommending findings of consistency with the General Plan. The Hanford Parks and Recreation Department participates in the review and recommendation of proposed projects. The Hanford Planning Commission and City Council are responsible for adopting such findings of consistency prior to project approval. The City Council is responsible for the City budgets and assigning development impact fees to provide for the expansion of park and recreation facilities.

Monitoring: The various implementing departments of the City of Hanford are responsible for administering the City's Site Plan Review and Subdivision Ordinance processes. An application for a Certificate of Occupancy is required prior to completing a project. The conditions of approval are checked prior to issuing a Certificate of Occupancy. The City Council as the legislative body of the City prepares annual budgets at which time programs can be included to expand park and recreation facilities.

4.15. TRANSPORTATION/CIRCULATION

4.15.1. Environmental Setting

4.15.1.a Streets and Highways Defined

A community's street system is composed of a wide range of facilities. All street and highway facilities serve two basic functions; mobility and land access. Mobility means the provision for the movement of motorists from one place to another. Land access means providing for the parking, storage or driveway access at the origin or destination of a person's trip. Each facility type in a circulation element is designed to emphasize to varying degrees the mobility or land access function. Some facilities emphasize land access over mobility, while other streets emphasize mobility over land access. Table 4.15- 1 delineates the typical function of the facilities used in this analysis.

Table 4.15- 1

Functional Classification

Facility Type	Emphasis
Freeway	Mobility with no direct land access and access limited to interchanges.
Expressway	Mobility with more frequent access to arterials but no direct land access.
Arterial	Mobility with access to collectors, some local streets and major traffic generators.
Collectors	Connects local streets with arterials, also provides access to adjacent land uses; balances mobility and access.
Local	Access to adjacent land uses only; no mobility function.

4.15.1.b Existing Street Systems

The following describes the existing circulation systems in the City of Hanford:

State Freeways and Highways

There are two state facilities serving the Hanford Planning Area, State Highway 198 and State Highway 43. The segment of State Highway 198 that passes through the Planning Area is considered a freeway. State Highway 43 is a two lane facility and functions as an arterial and major transportation route between Hanford and Selma to the north and Corcoran to the south.

Arterial and Collector Streets

Table 4.10-2 and 4.10-3 identifies streets designated as Arterial and Collector streets in the current Circulation Element of the City of Hanford.

4.15.1.c Local Streets and County Roads

The remaining streets in the Planning Area are classified as local. The remaining County roads that are within the Planning Area are unclassified roadways. The current function of these County roads is limited to providing access to the adjacent agricultural uses. Investigation of current traffic volumes on the County facilities revealed no urban levels of traffic.

Table 4.15- 2

Major/Minor Arterial Streets

North/South	
13th Avenue (Houston to Fargo) 12th Avenue (Idaho to Flint) 11th Avenue (Jackson to Flint)	10th Avenue (Jackson to Highway 43) Future 9th Avenue (Houston to Fargo) State Highway 43 (Expressway)
East/West	
Jackson Avenue (11th Avenue to 10th Ave.) Idaho Avenue (12th to 10th Ave.) Iona Avenue (12th to 10th Ave.) Houston Avenue (13th to SR43) Hanford-Armona Rd (13th to 10th, 9th to SR43) 3rd Street (1 way, 11th to 10th Ave.) State Highway 198 (Freeway)	4th Street (1 way, 11th to 10th Ave.) 6th Street (11th to 10th Ave.) 7th Street (Mall Dr. to 10th Ave.) Lacey Blvd. (10th Ave. to SR 43) Lacey Blvd. (13th Ave. to Irwin Street) Grangeville Blvd. (13th Ave. to SR 43) Fargo Ave. (13th Ave. to SR 43) Flint Avenue (12th Ave. to SR 43)

Table 4.15- 3

Major and Minor Collector Streets

North/South	
Campus/University (6th St. to Grangeville Blvd.) Greenfield (Lacey to 13th Ave.) - Future Rodgers (11th Ave. to Mulberry)[1] Redington (4th St. to Grangeville)[1] Irwin (4th St. to Grangeville)[1] Harris (6th St. to Grangeville)[1] Fitzgerald Ln. to Grangeville ½ mile north of Fargo	Douty Street (Hanford-Armona Rd. to Flint) Kensington (Grangeville to Fargo)[1] 91/4 Avenue (Lacey to Grangeville) Future Streets in North Future Streets in South Centennial Drive (Lacey to Grangeville future)
East/West	
Hume (13th to 11th Ave. future) Third (from 10th to 9th Ave.)[1] Garner (Lacey to 11th Ave.) Ivy (10th to 11th Ave.)[1] Florinda (11th to 9th Ave. future)[1] East Malone (Douty to 10th Ave.) McCreary (11th Ave. to Douty)	Terrace (Douty to 10th Ave.)[1] Leland (Douty to 9th Ave. future)[1] Cortner (11th Ave. To Kensington)[1] Mall Drive (ring-road) Future Streets in West Future Streets in East

Note: [1] Not developed as collector, but functions as collector.

4.15.1.d Existing Traffic Conditions

The existing traffic conditions were evaluated to develop a base line or beginning point for understanding of Hanford's existing street network. This analysis was completed for both state highways, arterials and selected collector streets. The analysis focused on three specific issues: street capacity, classified system pattern and connectivity.

The evaluation of street capacity was the central focus of the analysis process. A street or highway's capacity is effected by a number of factors. The number of lanes, the location and spacing of intersections, the type of traffic control devices used (stop signs, traffic signs, etc.), the traffic signal timing plan, the use of on-street parking, the percentage of trucks, the level of transit activity, and the number and location of adjacent driveways all having an effect on the carrying capacity of particular segment of street or highway.

For purposes of the development of a street and highway network that reflects conditions in Hanford, Table 4.15- 4 has been included to define carrying capacities of the street facilities in the community. Each facility is presented with a different number of lanes and with different geometric characteristics. The capacity shown for each facility represents the theoretical capacity of the street at Level-of-Service (LOS)

The evaluation of a street's capacity introduces the concept of level-of-service, which is defined as a qualitative measure describing operational conditions, within a traffic stream, and the perception of these conditions by motorists. A specific level of service definition generally describes these conditions in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. Level of service is divided into six categories and are given a letter designation from "A" to "F", with "A" representing the best operating condition and "F" representing the worst. A complete LOS description is provided in Table 4.15- 5.

For the purposes of assisting in the definition of level-of-service, volume-to-capacity ratios have been developed. Each level of service falls into a range of volume-to-capacity. Volume as used in this instance is the actual (existing) 24-hour traffic volume on a specific segment of street or highway. The corresponding ratio or percentage relates to the street's ability to carry that volume or traffic efficiently. The closer the volume gets to the capacity, the lower the operating efficiently of the street. For example, from 80 percent to 90 percent of capacity the street begins to show deterioration in operating efficiency, but continues to provide a reasonable level of service. After 90 percent of capacity is reached, the street begins operating less efficiently and the drive is subject to excessive delays.

Table 4.15- 4

Capacity or Functionally Classified System

Facility	Geometries	LOS "E" Capacity[1]
Freeway	4 Lane	80,000
	6 Lane	120,000
Expressway	4 Lane-divided	37,000
	6 Lane-divided	55,000
Arterial	2 Lane-divided	18,000
	4 Lane-divided	30,000
	6 Lane-divided	45,000
	2 Lane-undivided	12,000
	4 Lane-undivided	24,000
	2 Lane with lefts	15,000[2]
	4 Lane with lefts	27,000
Collector	2 Lane-divided	15,000
	4 Lane-divided	24,000
	2 Lane-undivided	9,000
	4 Lane-undivided	18,000
	2 Lane with lefts	12,000
	4 Lane with lefts	21,000
Local	2 Lane-undivided	5,000

Notes

1. *Daily two-way traffic volumes representing 99% of the street's capacity*
2. *includes left turn pockets and two-way continuous left turn lanes.*

Table 4.15- 5
Level of Service Description

Level of Service	Conditions	Description	Volume-to-Capacity Ratio	Delay (Seconds)	Delay (Seconds)
A	Free Flow	Users are unaffected by other traffic, freedom of speed and movement, level of comfort, convenience and safety is excellent.	0.00-0.59	≤10.0	≤10
B	Stable Operation	Users begin to notice other traffic, freedom of speed continues, but freedom to maneuver declines slightly.	0.60-0.69	10.1-20.0	10.1-15.0
C	Stable Operation	Users are affected by other traffic, freedom of speed and maneuvers are greatly affected. Traffic signals operate at maximum efficiency.	0.70-0.79	20.1-35.0	15.1-25.0
D	Approaching Unstable	Users are greatly affected by traffic, comfort, convenience and safety significantly affected. Users wait one signal cycle to pass through an intersection.	0.80-0.89	35.1-55.0	25.1-35.0
E	Unstable Operations	Traffic volumes at or near capacity, users wait several signals to pass through an intersection.	0.90-0.99	55.1-80.0	35.1-50.0
F	Forced Flow	Traffic volumes exceed the capacity of the street and traffic queues develop. Stop and go traffic conditions.	1.00-plus	>80.0	>50.0

Sources: 1997 Highway Capacity Manual., Special Report 209, Transportation Research Board.

Arterial and collector streets were analyzed and based on traffic carried during the study period in 1991 and updated to 2001 based on recent traffic counts or growth calculations were assigned a level-of-service. Table 4.15- 6 presents the Existing Conditions Analyses.

Table 4.15- 6
Existing Conditions Analysis

Street	Segment	Existing Geometrics	Facility Type	Existing Capacity	Existing Volume	Volume Capacity	LOS
Flint Ave.	13th Ave. to 12th Ave.	2 Lane	Collector	9,000		0.00	
	12th Ave. to 11th Ave.	2 Lane	Collector	9,000		0.00	
	11th Ave. to SH 43	2 lane	Collector	9,000		0.00	
Fargo Ave.	13th Ave. to 12th Ave.	2 Lane	Collector	9,000		0.00	
	12th Ave. to 11th Ave.	2 Lane	Collector	9,000	5500	0.61	B
	11th Ave. to 10th Ave.	2 Lane	Collector	9,000	7500	0.83	D
	10th Ave. to SH 43	2 Lane	Collector	9,000	4900	0.54	A
Courtner St.	11th Ave. to Kensington Way	2 Lane	Collector	9,000	2,200	0.24	A
Leland Way	Douty St. to 10th Ave.	2 Lane	Collector	9,000	2,500	0.28	A
	10th Ave. to 9 1/4th Ave.	2 Lane			1,900	0.21	A
Terrance Dr.	Douty St. to 10th Ave.	2 Lane	Collector	9,000	1,800	.20	A
McCreary Ave.	11th Ave. to Douty	2 Lane	Collector	9,000	1,800	0.20	A
Grangeville Blvd.	13th Ave. to 12th Ave.	2 Lane	Arterial	12,000	5,800	0.48	A
	12th Ave. to 11th Ave.	2 Lane w/lefts	Arterial	15,000	11,300	0.75	C
	11th Ave. to 10th Ave.	4 Lane w/lefts	Arterial	30,000	15,300	0.50	A
	10th Ave. to SH 43	2 Lane	Arterial	12,000	4,600	.38	A
Malone St.	Douty St. to 10th Ave.	2 Lane	Collector	9,000		0.00	
Florinda St.	11th Ave. to Douty St.	2 Lane	Collector	9,000	5,300	0.60	B
	Douty St. to 10th St.	2 Lane	Collector	9,000	3,800	0.47	A
	10th St. to 9 1/4th	2 Lane	Collector	9,000	2,900	0.47	A
Ivy St.	11th Ave. to Douty St.	2 Lane	Collector	9,000	2,270	0.25	A
	Douty St. to 10th Ave.	2 Lane	Collector	9,000	1,650	0.18	A
Lacey Blvd.	13th Ave. to 12th Ave.	2 Lane	Arterial	12,000	10,300	0.86	D
	12th Ave. to 11th Ave.	4 Lane w/median	Arterial	30,000	24,950	0.83	D
	11th Ave. to 10th Ave.	2 Lane w/lefts	Arterial	27,000	12,500	0.46	A
	10th Ave. to 9th Ave.	2 Lane w/lefts	Arterial	15,000	6,000	0.40	A
	9th Ave. to SH 43	2 Lane w/lefts	Arterial	15,000	3,500	0.23	A
Gardner Ave.	Lacey Blvd. To 11th Ave.	2 Lane	Collector	9,000	4,200	0.47	A
Seventh St.	East of Mall	2 Lane	Collector	9,000	3,100	0.34	A
	11th Ave. to Harris St.	2 Lane	Arterial	12,000	9,200	0.77	C
	Harris St. to 10th Ave.	2 Lane	Arterial	22,000	9,975	0.37	A
Sixth St.	11rh Ave. to Douty St.	2 Lane	Arterial	12,000	3,500	0.29	A
	Douty St. to 10th Ave.	2 Lane	Arterial	12,000	5,550	0.46	A
Fourth St.	11th Ave. to Douty St.	2 Lane	One-Way Arterial	15,000	2,950	0.20	A
	Douty St. to 10th Ave.	2 Lane	One-way Arterial	15,000	3,000	0.20	A

Street	Segment	Existing Geometrics	Facility Type	Existing Capacity	Existing Volume	Volume Capacity	LOS
SH 198	13th Ave. to 12th Ave.	4 Lane	Freeway	80,000	22,100	0.28	A
	12th Ave. to 11th Ave.	4 Lane	Freeway	80,000	21,100	0.26	A
	11th Ave. to 10th Ave.	4 Lane	Freeway	80,000	15,600	0.20	A
	10th Ave. to 9th Ave.	4 Lane	Expressway	37,000	14,100	0.38	A
	9th Ave. to SH 43	4 Lane	Expressway	37,000	14,100	0.38	A
Third St.	11th Ave. to Douty St.	2 Lane	One-way Arterial	15,000	2,650	0.18	A
	Douty St. to 10th Ave.	2 Lane	One-way Arterial	15,000	2,100	0.14	A
	10th Ave. to 9th Ave.	2 Lane	Collector	9,000	1,320	0.15	A
	9th Ave. to End	2 Lane	Collector	9,000		0.00	
Hanford-Armona Rd.	13th Ave. to 12th Ave.	2 Lane	Arterial	12,000	5,560	0.47	A
	12th Ave. to 11th Ave.	2 Lane w/lefts	Arterial	15,000	8,000	0.53	A
	11th Ave. to 10th Ave.	2 Lane	Arterial	12,000	8,650	0.72	C
	10th Ave. to Airport	2 Lane	Collector	9,000	700	0.08	A
	9th Ave. to SH43	2 Lane	Arterial	9,000		0.00	
Hume Ave.	12th Ave. to 11th Ave.	2 Lane	Collector	9,000	1,630	0.18	A
Houston Ave.	13th Ave. to 12th Ave.	2 Lane	Arterial	12,000		0.00	
	12th Ave. to 11th Ave.	2 Lane	Arterial	12,000	3,000	0.25	A
	11th Ave. to 10th Ave.	2 Lane	Arterial	12,000	3,100	0.26	A
	10th Ave. to 9th Ave.	2 Lane	Arterial	12,000		0.00	
	9th Ave. to SH 43	2 Lane	Arterial	12,000		0.00	
Iona Ave.	13th Ave. to 12th Ave.	2 Lane	Arterial	12,000		0.00	
	12th Ave. to 11th Ave.	2 Lane	Arterial	12,000	1,150	0.10	A
	11th Ave. to 10th Ave.	2 Lane	Arterial	12,000	2,400	0.20	A
	10th Ave. to 9th Ave.	2 Lane		9,000	200	0.02	A
	9th Ave. to SH 43	2 Lane					
Idaho Ave.	12th Ave. to 11th Ave	2 Lane	Arterial	12,000	600	0.05	A
	11th Ave. to 10th Ave.	2 Lane	Arterial	12,000	1,330	0.11	A
	10th Ave. to 9th Ave.	2 Lane		9,000	500	0.06	A
Jackson St.	12th Ave. to 11th Ave.	2 Lane	Arterial	12,000	300	0.03	A
	11th Ave. to 10th Ave.	2 Lane	Arterial	12,000	700	0.06	A
	10th Ave. to 9th Ave.	2 Lane	Arterial	9,000	400	0.04	A
13th Ave.	Iona Ave. to Houston Ave.	2 Lane	Arterial	12,000		0.00	
	Houston Ave. to SH 198	2 Lane	Arterial	12,000		0.00	
	SH 198 to Lacey Blvd.	2 Lane	Arterial	12,000		0.00	
	Lacey Blvd. To Grangeville Blvd.	2 Lane	Arterial	12,000		0.00	
	Grangeville Blvd. To Fargo Ave.	2 Lane	Arterial	12,000		0.00	
	Fargo Ave. to Flint Ave.	2 Lane	Arterial	12,000		0.00	
12th Ave.	Jackson Ave. to Idaho Ave.	2 Lane	Arterial	12,000		0.00	
	Idaho Ave. to Iona Ave.	2 Lane	Arterial	12,000		0.00	
	Iona Ave. to Hanford-Armona Rd.	2 Lane	Arterial	12,000		0.00	
	Hanford-Armona Rd. to SH 198	2 Lane	Arterial	12,000	8,900	0.74	C
	SH 198 to Lacey Blvd.	4 Lane		30,000	13,000	0.45	B
	Lacey Blvd. To Grangeville Blvd.	4 Lane	Arterial	30,000	11,800	0.39	A
	Grangeville Blvd. To Fargo Ave.	2 Lane	Arterial	12,000	8,000	0.67	A
	Fargo Ave. to Flint Ave.	2 Lane	Arterial	12,000	4,400	0.37	A

Street	Segment	Existing Geometrics	Facility Type	Existing Capacity	Existing Volume	Volume Capacity	LOS
Campus/ University	Sixth St. to Greenfield Ave.	2 Lane	Collector	9,000	4,400	0.49	C
	Greenfield Ave. to Grangeville Blvd.	2 Lane	Collector	9,000	3,000	0.33	A
Greenfield Ave.	Lacey Blvd. To University Ave.	2 Lane	Collector	9,000	5,400	0.60	B
Rodgers Rd.	11th Ave. to Grangeville Blvd.	2 Lane	Collector	9,000	2,250	0.25	A
	Grangeville Blvd. To Mulberry	2 Lane	Collector	9,000	1,300	0.14	A
11th Ave.	Jackson Ave. to Idaho Ave.	2 Lane	Arterial	12,000	1,800	0.15	A
	Idaho Ave. to Iona Ave.	2 Lane	Arterial	12,000	3,300	0.28	A
	Iona Ave. to Houston Ave.	2 Lane	Arterial	12,000	4,400	0.37	A
	Houston Ave. to Hanford-Armona Rd.	2 Lane	Arterial	12,000	7,600	0.63	B
	Hanford-Armona Rd. to SH 198	4 Lane w/median	Arterial	30,000	14,100	0.47	A
	SH 198 to Lacey Blvd.	4 Lane w/median	Arterial	30,000	22,700	0.76	C
	Lacey Blvd. To Grangeville Blvd.	4 Lane w/lefts	Arterial	27,000	18,200	0.67	B
	Grangeville Blvd. to Fargo Ave.	2 Lane w/median	Arterial	15,000	11,600	0.77	C
	Fargo Ave. to Flint Ave.	2 Lane	Arterial	12,000	4,000	0.33	A
Redington Ave.	Fourth St. to Lacey Blvd.	4 Lane	Collector	18,000	11,400	0.63	B
	Lacey Blvd. to Grangeville Blvd.	2 Lane	Collector	9,000	6,300	0.70	C
Leoni Dr.	Grangeville Blvd. to Courter	2 Lane	Collector	9,000		0.00	
Irwin St.	Houston Ave. to Hanford-Armona Rd.	2 Lane	Collector	9,000	1,400	0.16	A
	6th St. to Lacey Blvd.	2 Lane	Collector	9,000	3,900	0.43	A
	Lacey Blvd. to Grangeville	2 Lane	Collector	9,000	4,350	0.48	A
Douty St.	Hanford-Armona Rd. to 6th St.	2 Lane	Arterial	12,000	3,000	0.63	B
	6th St. to Grangeville Blvd.	2 Lane	Arterial	12,000	6,400	0.53	B
	Grangeville Blvd. to Fargo Ave.	2 Lane	Arterial	12,000	6,000	0.50	A
	Fargo Ave. to Flint Ave.	2 Lane	Arterial	12,000	4,150	0.35	A
Harris St.	6th St. to Florinda	2 Lane	Collector	9,000	2,000	0.22	A
Kenisgton Way	Grangeville Blvd. to Fargo Ave.	2 Lane	Collector	9,000		0.00	
10th Ave.	Jackson Ave. to Idaho Ave.	2 Lane	Arterial	12,000	2,200	0.18	A
	Idaho Ave. to Iona Ave.	2 Lane	Arterial	12,000	2,500	0.21	A
	Iona Ave. to Houston	2 Lane	Arterial	12,000	3,500	0.29	A
	Houston to Hanford-Armona Rd.	2 Lane	Arterial	12,000	7,100	0.59	A
	Hanford-Armona Rd. to SH 198	2 Lane w/lefts	Arterial	15,000	9,000	0.60	A
	SH 198 to Lacey Blvd.	4 Lane w/lefts*	Arterial	30,000	16,000	0.53	A
	Lacey Blvd. to Grangeville Blvd.	2 Lane w/lefts**	Arterial	15,000	14,3000	0.95	E
	Grangeville Blvd. to Fargo Ave.	4 Lane w/lefts	Arterial	30,000	17,3000	0.58	A
	Fargo Ave. to Flint Ave.	2 Lane	Arterial	12,000	7,4000	0.61	B

Street	Segment	Existing Geometrics	Facility Type	Existing Capacity	Existing Volume	Volume Capacity	LOS
9 ¼ Ave.	Lacey to Grangeville Blvd.	2 Lane	Collector	9,000	3,100	0.34	A
9th Ave.	Jackson Ave to Idaho Ave.	2 Lane	Arterial	9,000		0.00	
	Idaho Ave. to Iona Ave.	2 Lane	Arterial	9,000		0.00	
	Iona Ave. to Houston Ave.	2 Lane	Arterial	9,000		0.00	
	Houston Ave. to Hanford-Armona Rd.	2 Lane	Arterial	9,000		0.00	
	Hanford-Armona Rd. to Lacey Blvd.	2 Lane	Arterial	9,000	1,620	0.18	A
SH 43	Jackson Ave. to Houston Ave.	2 Lane	Express-way	18,000	7,600	0.42	A
	Houston Ave. to Hanford-Armona Rd.	2 Lane	Express-way	18,000	7,800	0.43	A
	Hanford-Armona Rd. to Lacey Blvd.	2 Lane	Express-way	18,000	9,400	0.47	A
	Lacey Blvd. to Grangeville Blvd.	2 Lane	Express-way	18,000	8,200	0.46	A
	Grangeville Blvd. to Fargo Ave.	2 Lane	Express-way	18,000	5,800	0.32	A
	Fargo Ave. to Flint Ave.	2 Lane	Express-way	18,000	5,700	0.32	A

* Out to bid in 2001 ** Widening Planned in next 3 years

The result of the existing level-of-service analysis shows that a majority of the streets in the community are currently operating at high levels of service. Only five segments are operating below level of service "C". The following discusses each of these segments.

10th Avenue

Tenth Avenue is a heavily traveled north/south arterial. Currently, the traffic volumes on 10th Avenue increase from 16,000 vehicles a day between State Highway 198 and Lacey Boulevard, to over 17,300 between Lacey Boulevard and Fargo Avenue. Level of service on 10th Avenue currently reaches "E" between Grangeville Boulevard and Lacey Boulevard, but planned widening of this two lane road will result in an acceptable level of service.

4.15.1.e Existing Classified System Pattern

The pattern and spacing of a community's street system is as important as the proper designation of the functional classification of the streets. Arterial streets located approximately every mile with collector streets located between the arterials at approximately half-mile intervals are ideal for communities like Hanford that have developed their circulation system based on the automobile.

This pattern accomplishes several goals. It balances the system by providing for mobility with arterials, thus not committing the community to an over expenditure of resources. It provides for movement within an area with collectors at half-mile intervals. It protects neighborhoods from through traffic by isolating local streets and promoting through movements on collectors and arterials that are designed to accommodate the trips. Finally, it compliments the land use element by providing location along arterials and collectors for traffic generating activities.

The development of two state highways in the Hanford area are excellent facilities for providing access to and from the community. State Highways 198 and 43 provide the main regional access to Hanford. The level of local trip volumes on each facility is currently low, however, as development takes place on the edges of the community, additional local trips can be expected to use these highways.

Hanford's arterial street pattern is generally one-mile spacing between the existing arterials. Exceptions to this spacing include Douty, Third, Fourth, Sixth and Seventh Streets, which are in the downtown area and provide for both mobility (to and through downtown), as well as access. These streets do not meet the right-of-way requirements or improvement standards for arterial streets, however they function as arterial streets.

Similar to some arterials some of the designated collector streets have evolved from use as opposed to development standards. Although some streets may currently be designated collectors, the current improvements do not meet the collector standard for right-of-way, travel way paving, and limited access. These streets present problems in contrast between definition and use, which will be addressed in the revised circulation element.

4.15.1.f Connectivity

The success of a community's street system is greatly effected by the concept of connectivity. Connectivity describes the continuity of a street system. Typically, street systems develop over a long period of time and can develop missing links in the network. These missing links can create both local and community wide problems as the traffic that would logically use the missing link must use another street to complete a trip. Hanford's street system has developed with several connectivity problems and several others that may cause problems in the future.

Generally, Hanford has developed its existing street system with excellent connectivity. All arterials are continuous within the community and the expansion of these facilities to provide for future development can be accommodated.

Hanford has three transportation facilities that will influence the future connectivity of the collector street system. The railroads, San Joaquin Valley Railroad and the BN & SF, bisect the community. While the arterial system had developed around these rail lines without breaks in connectivity, the railroads' policy of limiting the number of at-grade crossings will greatly effect the location and layout of collector streets. The BN & SF rail line will effect the collectors in northwest Hanford and in the Hanford Industrial Park. The San Joaquin Valley Railroad will influence the development of collectors west of 11th Avenue and east of 10th Avenue. In addition to the rail lines, State Route (SR) 198 will influence future north/south collectors. Like the Southern Pacific facility, the freeway will influence collector development west of 11th Avenue and east of 10th Avenue. The construction of the New Hanford High School/Learning Center was included in the analysis and its impact on future collector streets (Centennial Drive and Greenfield Avenue). Future traffic on 13th Avenue was also considered as a result of both residential and public facility devleopment. Similar to other development projects planned for the City, site specific traffic studies will be required on a project by project basis.

4.15.1.g Transit

The City of Hanford and the surrounding areas are served by a number of public, private, and social service transportation organizations. The following provides a description of some of these transit services.

4.15.1.g(1) Kings County Area Public Transit Agency

The largest provider of public transit services within Kings County is the Kings County Area Public Transit Agency (KCAPTA). KCAPTA is an intra-governmental agency with representatives from Avenal, Kings County, Hanford and Lemoore, and is responsible for the operation of the Kings Area Rural Transit (KART). KART offers scheduled daily bus service from Hanford to Armona, Lemoore, the Lemoore Naval Air Station, Visalia, Corcoran, Stratford, Kettleman City and Avenal. Ridership between Hanford and Lemoore is about 17,000 per month.

KART operates three services in Hanford, KART dial-a-ride, a scheduled fixed route bus service in the central Hanford area, and regular service to Lemoore, Avenal, Corcoran, and Visalia. Special trips are provided to Fresno for medical services (once per week) The KART dial-a-ride operates from 7:00 am to 11:00 pm Monday through Friday and on Saturday, from 9:00 am to 4:00 pm. Ridership for KART dial-a-ride in Hanford for calendar year 2000 totaled over 65,000 trips per month (annual ridership is 836,000).

KART began a scheduled fixed route bus service for Hanford in July of 1991. The scheduled bus service operated Monday through Friday from 7:30 a.m. to 11:00 p.m. Expansion of the service is planned as new retail developments are built. Ridership is estimated at 47,000 (45,000 fixed and 2,000 dial-a- ride) per month with 5 route buses

KART also operates four fixed routes to Laton, Lemoore, Visalia, Avenal, and Corcoran. This service also provides service to Lemoore Naval Air Station. The planned Westhills College in Lemoore (new campus west of Highway 41) will be served by the system. Educational institutions in Visalia including COS campus, Galen College, San Joaquin Business College, and Chapman College are served by the system.

4.15.1.g(2) Private Transportation

Private transit services are currently provided in Hanford by three taxi-cab companies (Hanford Taxi, Marathon Cab, and Central Valley Cab). Orange Belt Stages provides east/west bus service.

Orange Belt Stages offers daily scheduled bus service four times a day to Goshen and Visalia, one bus per day to Paso Robles and one per day to Fresno. The service to Paso Robles provides a link through Greyhound connections to the coastal communities. Service to Fresno also provides connecting service through Greyhound to northern and southern destinations.

4.15.1.g(3) Social Service Transit

There are a number of social service transit providers in the Hanford area. The largest is the Kings Rehabilitation Center, which provides a wide range of personal and educational services to the to its clients in the disabled community. Over 3,000 rides per month are provided by this agency in Kings County.

Other social service transit providers include; Kings View Mental Health Services, Kings County YMCA, the Kings County Community Action Organization and others.

4.15.1.h Rail

Both the Burlington Northern and Santa Fe and San Joaquin Valley Railroads (SJVR) serve Hanford. These rail lines cross in Hanford near the central business district. Rail lines have historically been an important part of Hanford's economic and transportation development.

Burlington Northern and Santa Fe and SJVR provide freight service to the Hanford Area. The Burlington Northern and Santa Fe railroad is planning to complete a second parallel track through Hanford generally within its existing right-of-way. Minor acquisitions of right-of-way may be required ranging between 5 and 20 feet. Constructing the additional track is necessary to improve operations through Hanford by improving the ability of trains to pass one another. Over time, it is expected that the number of trains using the system will increase as demand for rail service increases. The Burlington Northern and Santa Fe railroad currently operates between 40 and 50 trains per day on the system.

SJVR has a limited schedule of one train per day and is planning improvements to its trackage between Goshen and the City of Huron. Existing trackage is in relatively poor condition and upgrades are necessary to meet projected demands for east/west transportation. Development of new industry along the SJVR right-of-way has prompted renewed investment in the east/west service. SJVR anticipates an increase to 3 round trips per week and in the speed of trains using this route. Planning for improvements must include identifying future surface crossings that are needed to implement the City's circulation system. In the process of improving the SJVR trackage, existing street crossings need to be modernized to ensure safety and adequate operational standards for both rail and vehicular traffic.

Hanford is also served by AMTRAK passenger rail service on the Burlington Northern and Santa Fe facility. Currently, several northbound and southbound trains operate through the community each day. Northbound service connects Hanford with the Bay Area and Sacramento, while southbound service connects with Bakersfield and southern California. AMTRAK Feeder Bus Service is currently provided to and from the Hanford station to Tulare County. This bus service connects Porterville, Lindsay and Visalia with the AMTRAK trains.

4.15.1.i Bicycle and Pedestrian Issues

Hanford has adopted a comprehensive bicycle plan as part of the County Regional Transportation Plan. On-street bike lanes often create significant vehicular/bicycle conflicts. The cost of retrofitting the existing urban area for bicycle lanes can be cost prohibitive, especially along older streets that will see increased motor vehicle traffic. The General Plan and the Bicycle Plan promote the establishment of a shared use roadway system, but encourages newly developing areas to provide for bicycle facilities along major roadways and off-road systems as part of open space and recreation amenities.

Several areas in Hanford lack adequate pedestrian facilities. New construction requires curb and gutter improvements along with the installation of sidewalks and curb cuts in many areas.

4.15.2. Environmental Analysis

4.15.2.a Methodology

This analysis reviews the impacts of urban growth on the City's existing and planned street and roadway system. Impacts on Highway 198 and 43 are also considered in this analysis. The traffic engineering firm of K.D. Anderson (KDA) was retained to undertake the traffic analysis. KDA worked with Kings County Regional Transportation Planning Agency (KCAG) to access the most recent traffic model for Kings County an the City of Hanford. This model projected traffic to the year 2025. In addition to recent traffic count information available through the City of Hanford, KDA undertook traffic counts at intersections and on street segments that did not have current reliable data. Estimated daily traffic for some street segments were calculated based on growth in the community since the last traffic count. Focused analysis was directed to the intersection of 12th Avenue and Lacey Blvd. and the street segments in that general location along with intersections and freeway on- and off-ramps (SR 198). A separate report "Access Design Assessment in the Area of 12th Avenue/Lacey Boulevard" is attached as Appendix 4.15A to this EIR. KDA reviewed the Traffic Model forecasts to 2025 on streets and roads within the Planning Area and calculated the LOS for those segments based on existing conditions and forecast conditions with build-out improvements including additional lanes. For the purposes of modeling, the New Hanford High School/Learning Center was included in the model analysis. Conclusions from the traffic analysis are presented in this Section of the EIR. Mitigation measures most often are defined by the additional capacity of streets and roadways gained by increasing the number of lanes to accommodate forecasted traffic and maintaining an acceptable LOS.

4.15.2.b Thresholds of Significance

A significant impact would occur if the project would:

a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or

congestion at intersections)?

b) Exceed, either individually or cumulatively, a level of service standard established by the City or State for designated roads or highways?

c) Result in a change in air traffic patterns, including either and increase in traffic levels or a change in location that results in substantial safety risks?

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersection) or incompatible uses (e.g., farm equipment)?

e) Result in inadequate emergency access?

f) Result in inadequate parking capacity?

g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

4.15.2.c Impacts

Future Transportation Conditions

The General Plan Circulation Element was planned to ensure adequate circulation and access for the land uses described in the Land Use Element. While the direction and pace that the City may grow can never be absolutely clear, it is useful to make an estimate of future growth. Such projection of the future was used to estimate needs for street and highway facilities, and thus guide the planning and development process. The forecast also helps to establish the program of public improvements that would be needed in the future.

The Kings County Association of Governments (KCAG) regional travel demand forecasting model was used to forecast year 2025 traffic volumes on Hanford's streets. The model accounts for existing and anticipated land uses, as well as current and planned circulation system components. The accuracy of traffic model projections reflects the level of development in regional planning tool. Because the model cannot exactly duplicate local access conditions, accuracy can be limited within areas with numerous parallel streets. Thus while reasonable projections can be made for most arterials and collectors, information for some downtown streets may by unreliable.

State Highways

State Highway 198 is an existing full freeway through Hanford. Interchanges are proposed at 9th Avenue and improved interchanges are anticipated at 10th Avenue, 11th Avenue, 12th Avenue, and 13th Avenue.

Expressways

State Highway 43 is planned to be a 4 lane expressway from Flint Avenue on the North to Jackson Avenue on the South.

Arterials and Collectors

The Table 4.15- 7 lists proposed arterial and collector streets, the proposed level of improvement to mitigate significant impacts on the existing street system, expected future traffic and level-of-service with improvements listed.

Table 4.15- 7

Future Conditions Analysis On Future Street Systems

Street	Segment	Future Geometrics	Facility Type	Future Capacity	Future Volume	Volume Capacity	LOS
Flint Ave.	13th Ave. to 12th Ave.	2 Lane	Arterial	12,000	450	0.04	A
	12th Ave. to 11th Ave.	2 Lane	Arterial	12,000	450	0.04	A
	11th Ave. to SH 43	4 lane	Arterial	24,000	3,900	0.33	A
Fargo Ave.	13th Ave. to 12th Ave.	2 Lane	Arterial	12,000	5,300	0.44	A
	12th Ave. to 11th Ave.	4 Lane	Arterial	24,000	8,700	0.36	A
	11th Ave. to 10th Ave.	2 Lane w/left	Arterial	15,000	10,450	0.70	C
	0th Ave. to SH 43	4 Lane	Arterial	24,000	15,700	0.65	A
Courtner St.	11th Ave. to Kensington Way	2 Lane	Collector	9,000	2,800	0.30	A
Leland Way	Douty St. to 10th Ave.	2 Lane	Collector	9,000	1,800	0.20	A
	10th Ave. to 9 1/4th Ave.	2 Lane	Collector	9,000	5,8000	0.64	B
Terrance Dr.	Douty St. to 10th Ave.	2 Lane	Collector	9,000	750	0.08	A
Grangeville Blvd.	13th Ave. to 12th Ave.	4 Lane	Arterial	24,000	11,600	0.48	A
	12th Ave. to 11th Ave.	4 Lane	Arterial	27,000	14,100	0.52	C
	11th Ave. to 10th Ave.	4 Lane w/lefts	Arterial	27,000	20,500	0.76	C
	10th Ave. to 9th Ave.	4 Lane w/lefts	Arterial	27,000	20,000	0.74	C
	9th Ave. to SH 43	4 Lane	Arterial	24,000	4,750	0.20	A
Malone St.	Douty St. to 10th Ave.	2 Lane	Collector	9,000	1,800	0.20	A
Florinda St.	11th Ave. to Douty St.	2 Lane	Collector	9,000	4,200	0.47	A
	Douty St. to 10th St.	2 Lane w/lefts	Collector	12,000	6,100	0.51	A
	10th Ave. to 9 1/4th Ave.	2 Lane	Collector	9,000	5,800	0.64	B
Ivy St.	11th Ave. to Douty St.	2 Lane	Collector	9,000	4,500	0.50	A
	Douty Ave. to 10th Ave.	2 Lane	Collector	9,000	6,250	0.69	B
Lacey Blvd.	13th Ave. to 12th Ave.	4 Lane w/median	Arterial	30,000	17,200	0.57	A
	12th Ave. to 11th Ave.	4 Lane w/median	Arterial	30,000	19,200	0.64	B
	11th Ave. to 10th Ave.	4 Lane w/lefts	Arterial	27,000	16,300	0.60	B
	10th Ave. to 9th Ave.	4 Lane w/lefts	Arterial	27,000	18,100	0.67	B
	9th Ave. to SH 43	2 Lane w/lefts	Arterial	15,000	27,500	1.83	F
Gardner Ave.	Lacey Blvd. To 11th Ave.	2 Lane	Collector	9,000	4,600	0.51	A
Seventh St.	Mall Dr. to 11th Ave.	2 Lane	Collector	9,000	3,700	0.41	A
	11th Ave. to Harris St.	2 Lane	Arterial	12,000	10,100	0.85	D
	Harris St. to 10th Ave.	4 Lane	Arterial	24,000	11,800	0.49	A

Street	Segment	Future Geometrics	Facility Type	Future Capacity	Future Volume	Volume Capacity	LOS
Sixth St.	11th Ave. to Douty St.	2 Lane	Arterial	12,000	3,600	0.30	A
	Douty St. to 10th Ave.	2 Lane	Arterial	12,000	3,400	0.28	A
Fourth St.	11th Ave. to Douty St.	2 Lane	One-Way Arterial	15,000	8,400	0.56	A
	Douty St. to 10th Ave.	2 Lane	One-way Arterial	15,000	8,400	0.23	A
SH 198	13th Ave. to 12th Ave.	4 Lane	Freeway	80,000	39,300	0.49	A
	12th Ave. to 11th Ave.	4 Lane	Freeway	80,000	42,100	0.53	A
	11th Ave. to 10th Ave.	4 Lane	Freeway	80,000	32,500	0.44	A
	10th Ave. to 9th Ave.	4 Lane	Freeway	80,000	32,800	0.41	A
	9th Ave. to SH 43	4 Lane	Freeway	80,000	20,900	0.26	A
Third St.	11th Ave. to Douty St.	2 Lane	One-way Arterial	15,000	4,000	0.27	A
	Douty St. to 10th Ave.	2 Lane	One-way Arterial	15,000	6,700	0.45	A
	10th Ave. to 9th Ave.	2 Lane	Collector	9,000	2,800	0.31	A
	9th Ave. to End	2 Lane	Collector	9,000	4,950	0.53	A
Hanford-Armona Rd.	13th Ave. to 12th Ave.	4 Lane	Arterial	24,000	4,050	0.17	A
	12th Ave. to 11th Ave.	4 Lane	Arterial	24,000	8,500	0.35	A
	11th Ave. to 10th Ave.	4 Lane	Arterial	24,000	11,400	0.48	A
	10th Ave. to Airport	4 Lane	Arterial	24,000	2,600	0.11	A
	9th Ave. to SH43	2 Lane	Arterial	12,000	600	0.05	A
Hume Ave.	12th Ave. to 11th Ave.	2 Lane	Collector	9,000	5,800	0.64	B
Houston Ave.	13th Ave. to 12th Ave.	2 Lane	Arterial	24,000	5,660	0.24	A
	12th Ave. to 11th Ave.	2 Lane	Arterial	24,000	5,810	0.24	A
	11th Ave. to 10th Ave.	2 Lane	Arterial	24,000	8,100	0.33	A
	10th Ave. to 9th Ave.	2 Lane	Arterial	24,000	7,000	0.29	A
	9th Ave. to SH 43	2 Lane	Arterial	24,000	6,900	0.29	A
Iona Ave.	13th Ave. to 12th Ave.	2 Lane	Arterial	12,000	750	0.06	A
	12th Ave. to 11th Ave.	2 Lane	Arterial	12,000	400	0.03	A
	11th Ave. to 10th Ave.	2 Lane	Arterial	12,000	100	0.01	A
	10th Ave. to 9th Ave.	2 Lane	Arterial	12,000	450	0.04	A
	9th Ave. to SH 43	2 Lane	Arterial	12,000	350	0.03	A
Idaho Ave.	12th Ave. to 11th Ave	2 Lane	Arterial	12,000	450	0.04	A
	11th Ave. to 10th Ave.	2 Lane	Arterial	24,000	650	0.05	A
	10th Ave. to 9th Ave.	2 Lane	Arterial	12,000	450	0.04	A
	9th Ave. to SH 43	2 Lane	Arterial	12,000	450	0.04	A
Jackson St.	12th Ave. to 11th Ave.	2 Lane	Arterial	12,000	1,150	0.10	A
	11th Ave. to 10th Ave.	2 Lane	Arterial	12,000	1,350	0.11	A
	10th Ave. to 9th Ave.	2 Lane	Arterial	12,000	1,300	0.11	A
13th Ave.	Iona Ave. to Houston Ave.	2 Lane	Arterial	12,000	3,500	0.29	A
	Houston Ave. to Hanford-Armona Rd.	4 Lane	Arterial	24,000	8,700	0.36	A
	Hanford-Armona Rd. to SH 198	4 Lane w/median	Arterial	30,000	18,600	0.62	B
	SH 198 to Lacey Blvd.	4 Lane	Arterial	24,000	18,800	0.45	A
	Lacey Blvd. to Grangeville	4 Lane	Arterial	24,000	7,500	0.31	A
	Grangeville Blvd. To Fargo Ave.	2 Lane	Arterial	12,000	6,400	0.53	A
	Fargo Ave. to Flint Ave.	2 Lane	Arterial	12,000	2,500	0.21	A

Street	Segment	Future Geometrics	Facility Type	Future Capacity	Future Volume	Volume Capacity	LOS
12th Ave.	Jackson Ave. to Idaho Ave.	2 Lane	Arterial	12,000	2,750	0.23	A
	Idaho Ave. to Iona Ave.	4 Lane	Arterial	24,000	2,800	0.12	A
	Iona Ave. to Houston Rd.	4 Lane	Arterial	24,000	3,100	0.13	A
	Houston to Hanford-Armona Rd.	4 Lane	Arterial	24,000	6,100	0.25	A
	Hanford Armona Rd. to SH 198	4 Lane	Arterial	24,000	17,100	0.71	C
	SH 198 to Mall Dr..	6 Lane	Arterial	45,000	30,000	0.67	B
	Mall Dr. to Lacey Blvd.	6 Lane	Arterial	45,000	27,800	0.66	B
	Lacey Blvd. To Greenfield Blvd.	6 Lane	Arterial	45,000	25,000	0.46	A
	Greenfield Blvd. to Grangeville Blvd.	6 Lane	Arterial	45,000	20,700	0.35	A
	Grangeville Blvd. To Fargo Ave.	4 Lane	Arterial	24,000	3,100	0.26	A
	Fargo Ave. to Flint Ave	2 Lane	Arterial	12,000	3,100	0.26	A
Campus/ University	Sixth St. to Greenfield Ave.	2 Lane w/lefts	Collector	12,000	5,800	0.48	C
	Greenfield Ave. to Grangeville Blvd.	2 Lane	Collector	9,000	6,000	0.67	A
Greenfield Ave.	Lacey Blvd. To 12th Ave.	2 Lane w/lefts	Collector	12,000	11,200	0.93	E
	12th Ave. to Centennial	2 Lane w/lefts	Collector	12,000	8,600	0.72	C
Rodgers Rd.	11th Ave. to Grangeville Blvd.	2 Lane	Collector	9,000	2,800	0.31	A
	Grangeville Blvd. To Mulberry	2 Lane	Collector	9,000	3,900	0.43	A
11th Ave.	Jackson Ave. to Idaho Ave.	2 Lane	Arterial	12,000	1,110	0.09	A
	Idaho Ave. to Iona Ave.	4 Lane	Arterial	24,000	1,250	0.05	A
	Iona Ave. to Houston Ave.	4 Lane	Arterial	24,000	1,100	0.05	A
	Houston Ave. to Hanford-Armona Rd.	4 Lane	Arterial	24,000	4,800	0.20	A
	Hanford-Armona Rd. to SH 198	6 Lane w/median	Arterial	45,000	18,300	0.41	A
	SH 198 to Lacey Blvd.	6 Lane w/median	Arterial	45,000	20,700	0.46	A
	Lacey Blvd. To Grangeville Blvd.	6 Lane w/lefts	Arterial	45,000	14,700	0.33	A
	Grangeville Blvd. to Fargo Ave.	4 Lane	Arterial	24,000	15,400	0.64	B
	Fargo Ave. to Flint Ave.	2 Lane	Arterial	12,000	4,500	0.38	A
Redington Ave.	Fourth St. to Lacey Blvd.	2 Lane w/lefts	Collector	12,000	8,000	0.67	B
	Lacey Blvd. to Grangeville Blvd.	2 Lane w/lefts	Collector	12,000	6,500	0.54	A
Leoni Dr.	Grangeville Blvd. to Courtner St.	2 Lane	Collector	9,000	1,000	0.11	A
Irwin St.	Houston Ave. to Hanford-Armona Rd.	2 Lane w/lefts	Collector	12,000	7,300	0.61	B
	6th St. to Lacey Blvd.	2 Lane	Collector	9,000	6,000	0.67	B
	Lacey Blvd. to Grangeville	2 Lane w/median	Collector	12,000	2,400	0.20	A

Street	Segment	Future Geometrics	Facility Type	Future Capacity	Future Volume	Volume Capacity	LOS
Douty St.	Hanford-Armona Rd. to 6th St.	2 Lane w/lefts	Arterial	24,000	13,500	0.56	A
	6th St. to Grangeville Blvd.	2 Lane	Arterial	12,000	6,400	0.53	A
	Grangeville Blvd. to Fargo Ave.	2 Lane w/lefts	Arterial	15,000	4,900	0.33	A
	Fargo Ave. to Flint Ave.	2 Lane	Arterial	12,000	5,850	0.49	A
Harris St.	6th St. to Florinda	2 Lane w/lefts	Collector	12,000	3,700	0.31	A
Kenisgton Way	Grangeville Blvd. to Fargo Ave.	2 Lane	Collector	9,000	2,800	0.31	A
10th Ave.	Jackson Ave. to Idaho Ave.	2 Lane	Arterial	12,000			
	Idaho Ave. to Iona Ave.	4 Lane	Arterial	24,000			
	Iona Ave. to Houston	4 Lane	Arterial	24,000			
	Houston to Hanford-Armona Rd.	4 Lane	Arterial	24,000			
	Hanford-Armona Rd. to SH 198	4 Lane w/lefts	Arterial	27,000	5,200	0.19	A
	SH 198 to Lacey Blvd.	6 Lane w/median	Arterial	45,000	23,900	0.53	A
	Lacey Blvd. to Grangeville Blvd.	4 Lane w/lefts**	Arterial	27,000	25,100	0.93	E
	Grangeville Blvd. to Fargo Ave.	4 Lane w/lefts	Arterial	27,000	22,300	0.83	D
	Fargo Ave. to Flint Ave.	4 Lane	Arterial	24,000	13,300	0.55	A
9 ¼ Ave.	Lacey to Grangeville Blvd.	2 Lane	Collector	18,000	16,400	0.91	E
9th Ave.	Jackson Ave to Idaho Ave.	2 Lane	Arterial	12,000	100	0.01	A
	Idaho Ave. to Iona Ave.	2 Lane	Arterial	12,000	100	0.01	A
	Iona Ave. to Houston Ave.	2 Lane	Arterial	12,000	100	0.01	A
	Houston Ave. to Hanford-Armona Rd.	4 Lane	Arterial	24,000	3,000	0.13	A
	Hanford-Armona Rd. to Lacey Blvd.	6 Lane w/median	Arterial	45,000	8,200	0.18	A
	Lacey Blvd. to Grangeville Blvd.	6 Lane w/lefts	Arterial	45,000	11,500	0.26	A
	Grangeville Blvd. to Fargo	4 Lane	Arterial	24,000	3,550	0.15	A
SH 43	Jackson Ave. to Houston Ave.	4 Lane	Express-way	37,000	13,800	0.37	A
	Houston Ave. to Hanford-Armona Rd.	4 Lane	Express-way	37,000	11,800	0.32	A
	Hanford-Armona Rd. to SH 198	4 Lane	Express-way	37,000	13,300	0.36	A
	SH 198 to Lacey Blvd.	4 Lane	Express-way	37,000	19,700	0.53	A
	Lacey Blvd. to Grangeville Blvd.	4 Lane	Express-way	37,000	18,900	0.51	A
	Grangeville Blvd. to Fargo Ave.	4 Lane	Express-way	37,000	15,600	0.42	A
	Fargo Ave. to 10th Ave.	4 Lane	Express-way	37,000	10,000	0.27	A
	10th Ave. to Flint Ave.	4 Lane	Express-way	37,000	19,200	0.52	A

The traffic model forecasts an increase in the traffic within the Planning Area. The increase in traffic on many existing streets will exceed the capacity of those existing streets. This is considered a significant impact. Without improvement to the capacity of these streets, the level-of-service will fall below the City's accepted threshold LOS "D". Although the mitigation improvements are proposed for streets listed above, several will continue to operate at LOS "D" or above. These streets, and the applicable actions to be taken with regard to these areas, are listed below:

1. Lacey Blvd East of 9th Avenue. This roadway is currently designated a two lane road, but projected future traffic volumes could warrant the continuation of the four lane section already planned west of the intersection. However, because the western area is roughly defined in the KCAG traffic model, future planning may reveal that the development of the balance of the area streets system could reduce the volume on this street to the point that a two lane section is acceptable. While a four lane section should be included in the Circulation Element, this "interim" designation may be revisited in the future.

2. 9 ¼ Avenue Street from Lacey to Grangeville. The projected traffic volume on this roadway segment is linked to the location of the railroad crossing, and as a result the KCAG model focuses north-south travel on 9 1/4 rather than 9th Street. While the future traffic volume projection would require a four lane section to deliver LOS "C", actual traffic volumes are likely to be spread amongst area streets and together 9 1/4 and 9th will be capable of carrying future north-south demands as two lane streets.

3. Seventh Street from Harris to 11th. This two-lane section is projected to operate at LOS "D". While this condition may exceed the City standard, this portion of the area circulation has been constructed in a manner that prioritizes urban pedestrian circulation (i.e, planters, bulbs at intersections, etc). Thus as the City has already elected to prioritized non-automotive circulation in this area, minor exceedance of the LOS standard is acceptable.

4. 10th Street from Lacey to Grangeville and from Grangeville to Fargo. This four lane roadway is projected to operate at LOS "E" and LOS "D". However, the 110' right of way and 88' pavement section could be reconfigured in the future to accommodate a six lane section operating at LOS "B".

5. Greenfield Avenue from Lacey Blvd to 12th Avenue. This two lane street provides access to area schools and links the downtown area with developing western Hanford via Elm Street. While LOS "E" is projected, the roadway could be configured to provide three or four lanes by eliminating parking, and this mitigated configuration would yield LOS "A".

Local Streets

All other existing or planned streets within the Project Area are deemed to be local streets.

Special Treatment Projects

It is the intent of the City of Hanford to designate streets by their functional classification, and in developing area obtain right-of-way to the standards described in the Circulation Element, and eventually as conditions warrant construct improvements which meet design standards adopted by the City. Where feasible existing streets which have a functional classification of arterial or collector will be widened to meet the right-of-way and improvement standard. Where that is not feasible, special treatment will be required to enable the street to approach operational characteristics intended by its functional classification.

On existing streets, where arterial or collector standards require restricted access (infill situation or reconstruction), special exceptions will be considered by the City. However, the City remains committed to maintain the function of the street at its assigned classification and may require modified or restricted access or parking requirements in those situations.

Several arterial and collector segments can not feasibly be widened to meet right-of-way standards for their functional classification. For example, it would be cost prohibitive to acquire right-of-way along portions of Grangeville Blvd. between Douty and 11th Avenue to make typical arterial level improvements. In addition, specimen trees would have to be cut down, and many older houses would loose front yards which would increase noise and traffic conflicts. Other areas, such as Douty Street and Redington Avenue approaching the Downtown Business District, would face similar significant cost and land use issues.

Special treatment construction would attempt to improve the level-of-service by limited construction of additional lanes and intersection widening, peak hour parking management, and not constructing medians typical of arterial streets. The City desires to maintain flexibility in addressing the problem of increasing the roadway capacity, while preserving as much of the character of older neighborhoods as possible.

Public Transit

As the City grows, demand for both public and private transit service would increase. Historical trends of urbanizing valley communities suggest that this increase in travel demand (as a percentage) would actually be higher than the increase in population. Coupled with the changing requirements brought about by congestion management and air quality programs, increased demand for both public and private transit service would be expected over the period of this Circulation Element. The General Plan promotes residential design that will aid in the implementation and expansion of public transit in Hanford.

Private Transportation

The future of private transit operators is difficult to predict because of the volatile nature of the business in recent years. Future service levels of intercity transit would be influenced by changing market forces and state and federal government regulations. Demand for service between Hanford and metropolitan areas should continue to increase. With increasing demands brought about by air quality and congestion management, the private intercity operations in Kings County and the San Joaquin Valley would be expanded. It should be noted that if the private sector were unable to respond to this commuter demand, some of the demand would shift to the public sector.

Social Service

The role of social service transportation can be expected to decline over the life of this Circulation Element. In the future it can be expected that social service agencies would better utilize existing operations, consolidate service and integrate services with public transit services. This continuing reduction in social service transportation would place additional demand for service on KART public transit services.

Rail Issues

The continuing development in the Hanford Industrial Park will increase the demand for rail service along the BN & SF line. This increase in rail service will strengthen rail freight service to and from the community. It will also influence traffic in the Industrial Park with interruptions in east-west traffic.

AMTRAK Passenger service continues to be an important service to the community. With the State's commitment to long term development of improved passenger service in the Valley, the benefits to the community and Kings County are expected to increase.

The San Joaquin Valley Railroad has limited service and future service will depend heavily on competition from over-the-road haulers. The rail bed is deteriorating which limits the speed of trains. Should the rail right-of-way become, available or appear to be in danger of being sold for other than transportation services, the City of Hanford, Kings County, Tulare County and other cities and County areas served by this rail right-of-way should consider cooperative action to preserve the right-of-way, for the long-term potential of future commuter rail transit. In the short-term, the right-of-way could be used for other limited transportation facilities such as pedestrian or bicycle facilities, or open space.

Bicycle and Pedestrian Issues

Hanford has adopted a comprehensive bicycle plan as part of the Regional Transportation Plan. As the City grows, the need for expanded bicycle routes will be raised, although bicycle traffic comprises a small percentage of the overall traffic in the City. Bicycle routes could encourage people to use this alternative form of transportation and provide recreation for citizens in the community.

However, on-street bike lanes often create significant vehicular/bicycle conflicts. The cost of retrofitting the existing urban area for bicycle lanes is many times cost

prohibitive, especially along older streets, which will see increased motor vehicle traffic. The General Plan promotes the establishment of a shared use roadway system, but encourages newly developing areas to provide for bicycle facilities along major roadways and off-road systems as part of open space amenities. Although bicycle facilities are encouraged in future growth areas, a dedicated system does not appear feasible with the existing constraints in the downtown and through older neighborhoods.

Several areas in Hanford lack adequate pedestrian facilities. New construction requires curb and gutter improvements along with the installation of sidewalks and curb cuts in many areas. However, it will be difficult to mitigate a lack of sidewalks in some sections of the community due to their number and scattered locations.

Truck Route Issues

Trucking will continue to be the major mode for the movement of goods into and out of the community. With the continued urbanization of the area, the shipment of agricultural products will be augmented by an increasing amount of consumer goods movement. The opening of the Hanford Mall and the development of the industrial park will increase the level of trucking in the Planning Area.

As the trend of larger, heavier, and longer trucks may continue, the roadway design characteristics may need to be modified to accommodate theses vehicles on city streets. Design of truck routes may be focused on thicker pavement sections and wider turning radius.

The availability of secure truck parking is becoming problematic in the City. It is becoming less acceptable for trucks to be parked in residential areas because of visual and noise issues. Few locations can accommodate truck parking in the City. On street parking of large trucks, especially on busy streets, often interfere with intersection or driveway visibility creating traffic hazards. The General Plan contains policy that requires the City to review its Zoning Ordinance regulations, identify locations where truck parking is acceptable, and provide public information on those locations.

Planned Highway Commercial – Highway 43 and Lacey Blvd.

With the development of any planned project in this location, traffic demand at the SR 198 and SR 43 is expected to increase. Such increases would require some operational improvements at this interchange. Operational improvements may include structure widening for additional lanes, signal controls and lane additions at off-ramps. In addition there may be intersection distance concerns that may prevent turning movements on- and off- of Highway 43 at Lacey Blvd. It may be necessary to consider alternative locations for a future intersection of Highway 43 and Lacey Blvd. to minimize potential environmental impacts with traffic congestion. As development is proposed, additional traffic design study is required. The General Plan policies for this area require a master plan that will address these issues in concert with Caltrans.

4.15.2.d Mitigation Measures

The General Plan contains substantial Objectives, Policies, and Programs focused on providing adequate transportation within the Planning Area avoiding significant impacts

relating to Transportation and Circulation. Other General Plan Elements also provide Objectives, Policies, and Programs that support and complement the Circulation Element Objectives, Policies, and Programs. The Land Use Element and Hazards Element contain Policies and Programs which help mitigate potentially significant impacts associated with implementation of the General Plan particularly in addressing transportation issues. Newly developing areas and large projects are encouraged to undertake Master Planning to address not only circulation and connectivity, but land use and service delivery issues as well. Projects may be required on a case by case basis to analyze and mitigate site specific traffic impacts.

The City has adopted and implemented Traffic Mitigation Fees collected from all new development to contribute their fair share to addressing the cost of traffic mitigation projects on major facilities. These facilities include City streets and State Highways.

The General Plan Objectives, Policies, and Programs that mitigate potentially significant impacts to transportation and circulation at the General Plan level are: Objective LU 1, Policy LU 1.1, Programs LU 1.1-A, B & C, Objective LU 7, Policy LU 7.1, Program LU 7.1-A, Policy LU 9.1, Program LU 9.1-A, Policy LU 13.1, Programs LU 13.1-A, B &C, Policy LU 13.6, Policy LU 13, Objective LU 19, Policy LU 19.1, Program LU 19.1-A, Program LU 20.1-B & C; Objective CI-1, Policy CI-1.1, Policy CI 1.2, Program CI 1.2-A, Program CI 1.2-B, Policy CI 1.3, Policy CI 1.4, Policy CI 1.5, Policy CI 1.6, Program CI 1.6-A, Policy CI 1.7, Policy CI 1.8, Policy CI 1.9, Objective CI 2, Policy CI 2.1, Policy CI 2.2, Policy CI 2.3, Program CI 2.3-A, Objective CI 3, Policy CI 3.1, Policy CI 3.2, Policy CI 3.3, Program CI 3.3-A, Policy CI 3.4, Policy CI 3.5, Policy CI 3.6; Objective CI 4, Policy CI 4.1, Objective CI 5, Policy CI 5.1, Programs CI 5.1-A through C, Policy CI 5.2, Policy CI 5.3, Objective CI 6, Policy CI 6.1, Policy CI 6.2, Policy CI 6.3, Program CI 6.3-A, Objective CI 7, Policy CI 7.1, Policy CI 7.2, Objective CI 8, Policy CI 8.1, Policy CI 8.2, Policy CI 8.3, Policy CI 8.4, Policy CI 8.5, Policy CI 8.6, Policy CI 9.2, Objective CI 11, Policy CI 11.1; Program HZ 1.1-B, Objective HZ 4, Policy HZ 4.1, Policy HZ 4.2.

Level of Significance After Mitigation

Less than Significant.

Mitigation Implementation and Monitoring Responsibility

Implementation: The City of Hanford Community Development Department through the Annexation, Subdivision Map, and project review processes shall be responsible for recommending findings of consistency with the General Plan. The Hanford Planning Commission and City Council are responsible for adopting such findings of consistency prior to project approval. Various City Departments or other agencies may request site specific studies and mitigation measures at the project review process. Development Impact Fees are collected at the time of permitting. The City develops a Capital Improvement Program that includes major transportation improvements.

Monitoring: The various implementing departments of the City of Hanford are responsible for administering the City's Site Plan Review and Subdivision Ordinance

processes. An application for a Certificate of Occupancy is required prior to completing a project. The conditions of approval are checked prior to issuing a Certificate of Occupancy.

4.16. Utilities and Service Systems

Introduction

This Section of the EIR is organized somewhat differently than previous Sections. Because this Section addresses distinct services in the City, each of the topics will be organized by "environmental setting", "impacts" and "mitigation measures". The methodology and thresholds of significance will be stated in the beginning of the Section as opposed to prior to the impacts and mitigation measures. The advantage of this organization is that topical discussions will be kept together.

4.16.1. Methodology

Each of the topical areas of discussion was inventoried by collecting data from available published sources or by interviews with City Department heads. Where the General Plan established standards for service, they were used to compare and contrast the existing level of service within the City and the forecasted level of service at General Plan build-out. The General Plan typically establishes level of service for various services or requires public services to be available to new development. Where services are not delivered by the City, such as schools, the impacts are discussed within the limitations of statutory mitigation limitations.

4.16.2. Thresholds of Significance

A significant impact would result if a project would

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

f) Be serviced by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs?

g) Violate federal, state, and local statutes and regulation related to solid waste?

4.16.3. Water

4.16.3.a Environmental Setting

Supply

Hanford relies on ground water for domestic water supply. Deep wells 1,500 feet), below the Corcoran clay layer, provide generally good water quality. The City currently exceeds the Maximum Contaminant Level (MCL) for arsenic in some of the older shallow domestic water wells, with arsenic present at detectable levels in all of the wells. Arsenic is a naturally occurring element that is found in the underlying sediments of the San Joaquin Valley. In cooperation with the State Health Department, the City is pursuing a program to take older wells off-line and replace them with new and deeper wells to reduce the level of arsenic in the water supply system. However, the MCL for arsenic is expected to be lowered (less parts per million) in the near future by the Federal and State regulatory agencies. This new standard will require enhanced treatment of all well water to ensure that the City meets the water quality standards. Such treatment is expensive to install and operate. The cost of domestic water in the City is expected to be increased to compensate for escalating treatment and production costs.

During the drought years of 1976-77, the City adopted an Ordinance for water use and conservation. The City has required water meters on all new construction since 1976. The City recently completed a program to install 2,800 water meters on single family dwellings. Water meter requirements are placed on all swimming pool installations and any addition to a dwelling valued at more than $5,000. These water conservation measures have reduced average per capita per consumption to 207 gallons per day. Given water supply issues for urban as well as agricultural uses that have surfaced in the San Joaquin Valley, it is not likely that there will be a relaxation in the water conservation efforts of the City.

The City of Hanford receives its water supply from the underlying ground water aquifers. The City currently pumps approximately 10,200 acre feet per year (AFY) of water (2001 report of pumping from the City). Based on a service population of approximately 44,000, the City-wide average per capita water use in Hanford is 207 gallons per day. This water consumption figure is down from 249 gallons per day in 1993. The City attributes this reduction to water conservation efforts and improved water system monitoring and reductions in water loss in the system (pers. con. G. Misenhimer, 2002). Based on population and average household size the average demand for residential development is about 2.9 acre feet per year. In addition to demands on the public system, minor amounts of groundwater are used for industrial purposes located outside of the City, but within the Planning Area. Other major industrial users of groundwater apart from the City's system are the Contadina cannery and the GWF power facility.

The City of Hanford has adopted a water conservation ordinance which enforces limitations on domestic use of water, and requires water meters on all new development within the City. The City provides water supply from 18 existing wells. At least 3 new wells and 2, 2 million gallon storage tanks are planned within the next five years to

accommodate growth and address enhanced water quality standards. These improvements are consistent with the Water System Plan adopted by the City in November 1996.

The City of Hanford adopted an Urban Water Management Plan in April 1997. This Plan outlines the City's objectives and programs to maintain water conservation and meet the forecasted water demands of growth in the community. The Plan was prepared in cooperation with the Kings County Water District.

The domestic water supply system includes two above ground tanks for storage to help meet peak system demands. The City provides water supply from 18 existing wells. At least 3 new wells and 2, 2 million gallon storage tanks are planned within the next five years to accommodate growth and address enhanced water quality standards. These improvements are consistent with the Water System Plan adopted by the City in November 1996. This Plan evaluated the water supply and distribution within the General Plan Urban Limits.

Adding to the City's water conservation efforts, the City adopted a Water Efficient Landscape Ordinance consistent with State Law (Water Conservation Landscape Act). This ordinance limits the amount of turf in landscaping, requires plant groupings according to water needs, and provides flexibility to the landscape designer while promoting landscape water efficiency.

The City is a member of the of the Kings County Water Education Committee. Representatives of this committee provide education instruction on water conservation to public schools and at civic events.

Water supply appears to be sufficient for the long term with the implementation of ground water recharge programs. Urban growth will increase the demand for ground water and the need to participate in ground water recharge activities. The City's demand on ground water is relatively insignificant compared to the expanding demands from agriculture. It is estimated that urban use is less than 5% of the water pumped in this area. Kings County Water District purchases water for recharge purposes. The City of Hanford maintains more than 150 acres of recharge/sinking basins and slough remnants for storm water runoff. The Kings County Water District uses these for groundwater recharge purposes.

Irrigation water provided by the Kings County Water District and other water providers and users has also reduced the demand on groundwater in normal water years, and aided in recharge through distribution canals, sinking basins and storm water runoff facilities. Water table information (Lines of Equal Elevation of Water in Wells, Unconfined Aquifers, State of California, Department of Water Resources, San Joaquin Valley, Kings County Water District) indicate that in non-drought years natural recharge and the irrigation water supply provided by the Kings County Water District and the Lakeside Irrigation Water District have provided some stabilization to groundwater levels. This banking has an overall beneficial effect in expanding available water resources. In drought years however, when water deliveries are constrained, the

dependence on groundwater increases that reciprocally lowers groundwater levels. Also effecting agricultural demand on groundwater is the decision to reduce productive acreage in drought years.

Naturally occurring Arsenic in the ground water supply is a concern in meeting current and future water quality standards. Deeper wells to the north of the City appear to provide better water quality. There are no practical alternatives to ground water supply. A guaranteed source of surface water is not readily available, and the cost of obtaining surface water appears to be prohibitive.

The ultimate limiting constraint is the capacity of the aquifer. Estimates have been made of the quantity of water available in the confined aquifer. As with all renewable natural resources, conservation is important for long term use. There is limited scientific knowledge of the confined aquifer. The City's long term development potential will depend on expanding and documenting this knowledge and developing cooperative conservation efforts to bank water.

Conservation will remain a priority for the foreseeable future. Reuse of treated wastewater is gaining popularity, but retrofitting existing developed areas is currently impractical. The cost effectiveness of satellite tertiary plants must be evaluated against conservation programs and initial cost for new residential development and open space irrigation needs.

Distribution System

Hanford's main domestic water supply system consists of 12 inch mains laid out on an approximate one mile grid. Expansion of the system will require continued looping of lines and expansion of fire flow reserve facilities. There are few, if any, system constraints for future development.

4.16.3.b Impact

The conversion of agricultural and vacant fallow lands within the Planning Area to proposed residential, commercial, and industrial land uses will result in an increase in the demand for groundwater. Based on a community-wide per capita water demand of 207 gpd. and a 2002 population of 43,575 (State Department of Finance estimate), the current water demand is approximately 10,200 ac.ft. per year. Assuming the General Plan 2025 build out (a population of over 82,200), the forecasted water demand would be about 19,050 acre-feet per year (see). This new demand represents a 94% increase in the current urban water demand in the City, exclusive of significant water consuming industrial users.

The calculations of total water demand in Table 4.16- 1 are based on the agricultural consumption of 2.4 ac.ft. per year and a 55% percolation rate of irrigation. It is estimated that 80% of the land converted to urban development is irrigated. General Plan build-out in 2025 is estimated to convert 4,475 acres of agricultural land. This table also accounts for the net drainage recharge between agricultural land and urban land. Urban land will generate slightly more recharge to the City's drainage basins because of

the increased amount of impervious surface and the characteristics of urban drainage basins over agricultural land. In the agricultural condition, the calculations assume that 55% of rainfall is percolated. In the urban condition, 35% of rainfall is lost to evaporation on hard surfaces and drainage basin surfaces, while 65% is percolated. This results in a net increase for urban recharge efforts. The City produces treated wastewater that is provided for irrigation supply on 1,600 acres of land it owns or the effluent is provided to other agricultural users. Assuming a 20% treatment plant loss of total water and a 55% percolation rate as applied to agriculture, there is a return of groundwater extracted for urban use. The recharge deficit is not substantial. However, the City should continue to participate with the water districts in recharge programs and assist in obtaining additional supply of surface water that may be recharged.

Table 4.16- 1

Acre Feet of Recharge to Accommodate New Growth

Year	Water Demand Ac/Ft/Yr.	Ac/Ft/Yr. From Ag. Land Conversion	Net Drainage Recharge Ac/Ft/Yr	Wastewater Recycling	Recharge Deficit
2005	872	447	20	382	23
2010	2,495	1,279	57	1,094	65
2020	6,499	3,331	149	2,850	169
2025	8,955	4,590	206	3,928	232

Although the agricultural and urban water demands may be similar, the water sources may differ. It is assumed, urban water will be pumped from deep wells while the cropland could be irrigated with either surface water or shallow groundwater above the E-clay.

Another factor in the analysis of the groundwater impacts of the project is the source of the urban and agricultural groundwater. If, for example, the urban wells pump groundwater from the deeper aquifer and the agricultural wells (that serve the land designated for development) pump from the shallower aquifer system, the project could result in a net increase in pumping from the deeper aquifer and a net increase of water available in the shallower system. The underlying assumption is that groundwater pumped to serve urban uses is not totally lost. Approximately one-half of the water consumed by urban uses ultimately is treated at a wastewater treatment plant and disposed of by irrigation of cropland. The development of the proposed land uses will result in a increase in the amount of wastewater treatment plant effluent that is reclaimed as part of the overall water balance.

Adding to the water balance calculation is the credit for recharge of storm water run-off. With the conversion of raw land to urban uses, substantial impermeable surface is added which deflects storm water. Urban development collects and channels this storm water to collection facilities where it is recharged into the ground water system, to the

extent feasible. The loss of storm water from evaporation/transpiration is substantially reduced over raw land. In addition to storm water recharge, the City of Hanford is participating with irrigation districts to build larger basins and make them available for the recharge of excess surface water when available.

Table 4.16- 1 projects that after consideration of agricultural land conversion, storm water recharge for newly developed land, and treated wastewater recharge, additional water recharge areas of 232 acre feet per year will be required by the year 2025. This Table assumes natural groundwater recharge from the Kings River and other surface drainage, or transmission facilities meets or exceeds the current groundwater recharge demand for the City of Hanford.

Naturally occurring Arsenic in the groundwater supply is a concern in meeting current and future water quality standards. Deeper wells to the north of the City appear to provide better water quality. There are no practical alternatives to groundwater supply. A guaranteed source of surface water is not readily available, and the cost of obtaining surface water appears to be prohibitive.

The ultimate limiting constraint to Hanford's domestic water supply is the capacity of the aquifer. Estimates have been made of the quantity of water available in the confined aquifer. As with all renewable natural resources, conservation is important for long term use. The City has adopted water conservation ordinances and requires water meters for all new development. There is limited scientific knowledge of the confined aquifer. The City's long term development potential will depend on expanding and documenting this knowledge and developing cooperative conservation efforts to bank water.

Conservation will remain a priority for the foreseeable future. Reuse of treated wastewater is gaining popularity, but retrofitting existing developed areas is currently impractical. The cost effectiveness of satellite tertiary plants must be evaluated against conservation programs and initial cost for new residential development and open space irrigation needs.

Implementation of the General Plan could have a potential significant impact on the water supply available to the City. Expansion of the City's water treatment and distribution system is necessary to provide adequate service for build-out of the Planning Area. Expanding the treatment and distribution system are technology possible and do not represent a less than significant impact. Because of water treatment regulations the cost of providing domestic water may be more expensive as new treatment technologies are implemented.

4.16.3.c Mitigation Measures

No mitigation measures are required beyond the Policies and Programs contained in the General Plan. The General Plan Open Space/Conservation, and Recreation Element, and the Public Facilities Element contains several Policies and Programs which mitigate impacts associated with implementation of the General Plan. Specifically Program OCR 3.2-A; Objective OCR 8, Policy OCR 8.1, Programs OCR 8.1-A & B; Policy OCR 8.2, Programs OCR 8.2-A through C; OCR 8.3, Program OCR 8.3-A; Policy OCR 8.4, Programs OCR 8.4 - A through C; Policy OCR 8.5; Policy OCR 8.6; Objective OCR 9, Policy OCR 9.1, Program OCR 9.1-A; Policy OCR 9.2, Policy OCR 9.2 – A;

Objective OCR 10, Policy OCR 10.1, Program OCR 10.1 – A, Program OCR 10.1 – B; Policy OCR 10.2, Program OCR 10.2-A, Objective PF 2, Policy PF 2.1, Policy PF 2.2, Policy PF 2.3, Objective PF 4, Policy PF 4.1; Policy PF 4.2; Policy PF 4.3, Program PF 4.3 – A; Policy PF 4.4, Programs PF 4.4-A & B, Objective PF 5, Policy PF 5.1, and Policy PF 8.1.

Level of Significance After Mitigation

Less Than Significant

Mitigation Implementation and Monitoring Responsibility

Implementation: The City of Hanford Community Development Department through the Annexation, Subdivision Map, and project review processes shall be responsible for recommending findings of consistency with the General Plan. The Hanford Public Works Department participates in the review and recommendation of proposed projects. The Hanford Planning Commission and City Council are responsible for adopting such findings of consistency prior to project approval. The City Council is responsible for the City budgets and assigning development impact fees to provide for the expansion of water treatment and distribution facilities.

Monitoring: The various implementing departments of the City of Hanford are responsible for administering the City's Site Plan Review and Subdivision Ordinance processes. An application for a Certificate of Occupancy is required prior to completing a project. The conditions of approval are checked prior to issuing a Certificate of Occupancy. The City Council as the legislative body of the City prepares annual budgets at which time programs can be included to expand water treatment facilities and distribution system.

4.16.4. Sewer

4.16.4.a Environmental Setting

Treatment

The City's wastewater treatment facility permitted and designed to treat 5.5 mgd and is currently processing approximately 5 million gallons per day in domestic and industrial wastewater. The system is currently undergoing expansion to a design capacity of 8 million gallons per day (mgd). Expansion of the wastewater treatment plant is planned to be complete in 2003 and will provide capacity for growth to 2016.

The City has initiated a program to ensure long-term reuse of treated disinfected wastewater for agricultural purposes and recharge of groundwater supplies for agriculture. The City has obtained a "Master Reclamation Permit" from the Regional Water Quality Control Board for this purpose. Approximately 70-80% of the influent to the wastewater facility reused for agricultural irrigation. Under the regulation of the Regional Water Quality Control Board, this treated wastewater can be used for limited agricultural purposes. At the present time, the City has an agreement with the Lakeside Ditch Company to take the effluent and transport it to agricultural users (the effluent

may be mixed with the company's surface water supply when available). The reuse of treated disinfected wastewater accomplishes two important water conservation efforts: 1) the additional supply from the City extends the surface water irrigation season; 2) reduces the need for agricultural pumping of groundwater in an area known to be low in groundwater.

The City maintains the option of irrigating land it owns. To ensure long-term feasibility of effluent reuse and preserve agricultural land, the City acquired approximately 1,600 acres of land southwest of the community. This land, when connected to the wastewater treatment facility by a pipeline is capable of accepting reusable treated disinfected wastewater for agricultural purposes.

Collection System

While the capacity of the wastewater treatment plant is not an immediate constraint to growth, the capacity of the collection and transportation system is a major constraint in some areas of the City's Planing Area.

To allow growth east of the existing City a major new interceptor line must be installed to connect this area with the wastewater treatment plant. Extending the collection system will be expensive. Extending a traditional collection system appears to be a long-term cost-effective solution to providing sewer service. The public investment in the City's wastewater treatment facility can be maintained and there is an efficiency in operating and maintaining a single facility, especially with the organized reuse of treated wastewater already in place.

However, there are other options available to the City to solve the lack of capacity in the collection system. Water reclamation plants have been used in other communities where extensions of collection systems have been impractical or there is a need for a source of irrigation water. These satellite tertiary wastewater treatment systems produce reclaimed water for irrigation of open space or potentially certain agricultural crops. Strategic location of such plants, where there are cost advantages, can provide an alternative to extension of sewer interceptors and provide irrigation water for extensive open space needs.

The wastewater collection system is basically a gravity system with lift stations as necessary. A gravity system is the most cost effective and energy conservative system to operate. Major lines are in a north/south orientation directed toward the wastewater treatment plant. A Sewer System Master Plan was prepared in 1990 by Boyle Engineering Corp that contained growth projections and recommended system improvements to accommodate build-out, within the Planning Area of the City. The growth rate assumptions and projected residential densities are consistent with projections contained in this General Plan. Recommended actions to expand the collection system have been implemented by the City with the adoption of Resolutions creating the

12th Avenue and the 9th Avenue Sanitary Sewer Area of Benefit Districts and establishing facility improvement fees for each of the districts.

Growth Direction

Among the major land use issues discussed during the 1994 update to the General Plan, was the timing of growth on the east vs. growth on the west. There is remaining capacity in the collection system on the west side of the City. Although there are ways of gaining additional collection capacity on the eastside, these are generally more expensive than "buying in" to a system that has available capacity. Location of available sewer capacity and timing of line extensions have a tremendous growth inducing influence. The present pattern of growth in the City suggests that developers will take advantage of the remaining capacity in the 12th Avenue line in the near term, before constructing the more expensive 9th Avenue interceptor.

It is not foreseeable that the City will have the resources to construct the 9th Avenue interceptor without the commitment of the property owners benefiting from that improvement. Because of low intensity land use south of Highway 198, and the restrictions placed on development as a result of the airport runway extension, financing an easterly loop of that portion of the 9th Avenue interceptor may be of little interest to property owners in that area. The City is continuing to evaluate alternative routing of the interceptor, possibly using 10th Avenue to extend service to the eastern part of the Planning Area. Without some form of underwriting, residential and commercial development north of Highway 198 may have to bear the cost of that portion of the line.

This constraint could be removed if a new source of funds were to become available for the construction of the interceptor line and the City selected it as a priority for the use of those funds. If it was determined to be economically feasible by the developers, another alternative could be the development of a water intensive use (golf course or open space project) in combination with a water reclamation plant. A reclamation facility approach could address two issues: First, if properly designed, the facility could potentially reclaim some of the existing wastewater for use in open space irrigation freeing up capacity in existing sewer lines. This alternative is not likely to eliminate the need for the 9th Avenue line, but could reduce the size of that line and the extend the construction date out into the future. This may allow sufficient funding to be generated in connection with new eastside development to fund the 9th Avenue line. Although this alternative may advance the timing of growth on the eastside, it may not reduce the overall cost since two systems would have to be constructed in the long run. Second, using reclaimed water would directly benefit ground water recharge in that immediate area. Using reclaimed water would also reduce dependency on ground water thereby conserving a valuable resource.

Treatment Capacity

The City's Wastewater Treatment Plant capacity appears to be adequate for the medium and long term. Unless water quality regulations change dramatically there will be a continued reliance on reuse of wastewater for agricultural irrigation. The limitations

on agricultural crop irrigation reflect state and federal water quality standards used for irrigation. The City has moved forward in the preservation of farmland, with the acquisition of approximately 1,600 acres of land for reuse of treated wastewater. Advantages of reusing treated wastewater is the rich nitrogen content which lowers the fertilizer demand, lower cost of water, and year-round availability.

Alternatives

Satellite water reclamation plants may provide opportunities for reducing demand on existing collection systems or the need to install new collection systems. Satellite water reclamation plants are more expensive to construct because they produce high quality reclaimed water. Cost effectiveness of this type of plant is achieved when other capital and operation and maintenance costs are avoided. Those avoided costs include; the cost of installing long runs of interceptors, substituting the cost for municipal water to irrigate large open space areas (like golf courses or extensive greenbelt and linear parkways) by the use of reclaimed water. Substantial water conservation is also achieved with the use of reclaimed water for irrigation.

Table 4.16- 2

Wastewater Treatment Plant Demand Forecast

Year	Cumulative New Population	Per capita mpd Production	Commercial industrial residual	Total WWTP Production gpd for growth	Growth Wastewater Generated mgd	Capacity Needed to Accommodate Growth	Existing Capacity	Plant Size Needed
2002	43,575	4.79	0.21	5,000,000	5.0	5.0	5.5	-0.5
2005	3,764	.414	0.01	426,619	0.43	5.4	8.0	-2.6
2010	10,773	1.18	0.03	1,221.096	1.2	6.2	8.0	-1.8
2020	28,058	3.08	0.09	3,180,366	3.2	8.4	8.0	0.2
2025	38,664	4.25	0.13	4,382,571	4.4	9.4	8.0	1.4

The land currently used for wastewater disposal is located within the City's industrial park area and within the recently approved Enterprise Zone. The value of this land for industrial expansion will increase over time, as well as the potential for conflict with future industrial uses. The City plans to use the 1,600 acres it has purchased for wastewater disposal purposes upon completion of any permitting process.

Water conservation efforts have both positive and negative effects on the City's Wastewater Treatment Plant. The reduction of wastewater in the sewer system from conservation programs may create additional treatment capacity for additional residential units at the plant, however, lower total amounts of water in the waste stream increases concentrations of wastes requiring modified treatment techniques.

4.16.4.b Environmental Impacts

Capacity of the City's Wastewater Treatment Plant appears to be adequate for the medium term, and longer term when additional or relocated disposal areas have been secured. Unless water quality regulations change dramatically there will be a continued reliance on percolation and evaporation disposal associated with limited agricultural irrigation. The limitations on agricultural crop irrigation reflect state and federal water quality standards used for irrigation. Additionally, as more agricultural land is needed for long term disposal sites an opportunity exists for the City to also engage in the preservation of farmland, and even in some cases create additional productive farmland with the addition of its disposal water resource. Other advantages in using this disposal water are the rich nitrogen content which lowers the fertilizer demand, and the cost of the water is less and available year round.

A major land use issue is the timing of growth between eastside and westside of the City. The choice and timing of developers and the City will be directly influenced by the 12th Avenue or 9th Avenue sewer collection line. The choice and timing will dictate the near term direction and effect the cost of growth in the City. The location and remaining capacity of sewer lines is in some ways more critical to the direction of growth than most other infrastructure, with the possible exception of circulation. There is existing additional capacity in the sewer collection system serving the westside of the City to accommodate short term growth. Projects may be proposed such as the New Hanford High School/Learning Center that will substitute residential demands for school demands. There is not a substantial difference in amounts of sewer demand and the educational uses may be less than comparable residential acreage.

Sufficient development improvement fees can be collected or developer construction of parts of the system to provide necessary additional capacity over time is feasible without engaging in major system improvements. This existing available capacity will allow partial development of the westside (the exact number of units can only be determined on the basis of a detailed study), however the remainder of the build out will depend on the developments ability to finance major improvements to the 12th Avenue system. There are major capacity problems on eastside of the City that represent a significant growth constraint until the 9th Avenue interceptor is constructed.

Strategic growth considerations go hand in hand with cost considerations when selecting line extension priorities. Location and timing of line extensions have a tremendous growth inducing influence. The present pattern of growth in the City suggests that developers will take advantage of the remaining capacity in the 12th Avenue line in the near term before tackling the more expensive 9th Avenue interceptor. It is not foreseeable that the City will have the resources to construct the 9th Avenue interceptor without the commitment of the property owners benefiting from that improvement. Because of low intensity land use south of Highway 198, financing that portion of the 9th Avenue interceptor will have little interest from adjoining property owners (unless major industrial development is located there). Residential and commercial development north of Highway 198 may have to bear the cost of that portion of the line if none of the adjoining property owners south of Highway 198 desire to participate in funding the system. The cost per residential unit served is an important factor in maintaining housing affordability. During the short-term, it is apparent that development along the 12th Avenue system will be the most affordable.

This constraint could be removed if a new source of funds were to become available for the construction of the interceptor line and the City selected it as a priority for the use of those funds. If it was determined to be economically feasible by the developers, another alternative could be the development of a water intensive use golf course or open space project) in combination with a water reclamation plant. This alternative is not likely to eliminate the need for the 9th Avenue line, but could reduce the size of that line and the extend the construction date out into the future. This may allow sufficient funding to be generated in connection with new eastside development to fund the 9th Avenue line. Although this alternative may advance the timing of growth on the eastside, it may not reduce the overall cost since two systems would have to be constructed in the long run. A full financial analysis is necessary to demonstrate the cost effectiveness of this alternative and that there is a firm financial commitment of developers to finance the reclamation facility.

The General Plan Land Use Element identifies the potential for a Planned Highway Development at the intersection of Highway 198 and Highway 43. This location is at the outer reaches of the future sewer collection system. Development of this location could be allowed with on-site treatment facilities, provided that it would also construct traditional sewer lines that can be connected to the City's system when within reach. This is an exception to the City's sewering policies and only allowed under special conditions strictly monitored by the City.

Implementation of the General Plan would adversely impact the wastewater treatment plant and there would be insufficient capacity in the existing wastewater collection system in the Hanford Planning Area. An increase in the demand for domestic wastewater collection systems and treatment would result as population and the number of residential, commercial, and industrial uses increase. However, implementation of the policies and programs contained in the proposed General Plan would adequately mitigate impacts to a less than significant level.

Implementation of the General Plan would adversely impact the wastewater treatment plant and there would be insufficient capacity in the existing wastewater collection system in the Hanford Planning Area. An increase in the demand for domestic wastewater collection systems and treatment would result as population and the number of residential, commercial, and industrial uses increase. This is a potentially significant impact. However, implementation of the policies and programs contained in the proposed General Plan would adequately mitigate impacts to a less than significant level.

4.16.4.c Mitigation Measures

No mitigation measures are required beyond the Policies and Programs contained in the General Plan. The General Plan Open Space/Conservation, and Recreation Element, and the Public Facilities Element contains several Policies and Programs that mitigate impacts associated with implementation of the General Plan. Specifically Program OCR 3.2-A, Objective PF 2, Policy PF 2.1, Policy PF 2.2, Policy PF 2.3, Objective PF 6, Policy PF 6.1, Programs PF 6.1-A & B, Policy PF 6.2, and Policy PF 8.1.

Level of Significance After Mitigation

Less than Significant

Mitigation Implementation and Monitoring Responsibility Implementation

Implementation: The City of Hanford Community Development Department through the Annexation, Subdivision Map, and project review processes shall be responsible for recommending findings of consistency with the General Plan. The Hanford Public Works Department participates in the review and recommendation of proposed projects. The Hanford Planning Commission and City Council are responsible for adopting such findings of consistency prior to project approval. The City Council is responsible for the City budgets and assigning development impact fees to provide for the expansion of wastewater treatment and collection facilities.

Monitoring: The various implementing departments of the City of Hanford are responsible for administering the City's Site Plan Review and Subdivision Ordinance processes. An application for a Certificate of Occupancy is required prior to completing a project. The conditions of approval are checked prior to issuing a Certificate of Occupancy. The City Council as the legislative body of the City prepares annual budgets at which time programs can be included to expand wastewater treatment and collection facilities.

4.16.5. Drainage

4.16.5.a Environmental Setting

Storm water drainage is accomplished in the Planning Area through a system of storm water collection and water recharge basins and limited discharge into the Central Branch of Peoples Ditch Company irrigation canal. The maximum discharge into the canal is limited by agreement to a total simultaneous flow of 50 cubic feet per second.

Several drainage studies within the Planning Area have recommended acquiring and improving natural sloughs as part of the overall drainage system. The sloughs provide capacity for storm water retention, but also are an excellent location for ground water recharge. These studies have recommended improving the capacity of the Peoples Ditch facility and development of downstream basins (Weidman Basin) as a means of providing an outfall for storm water and recharge. In non-storm seasons, the basin is used to recharge aquifers with excess surface water carried in the canal system. The City purchased and developed an additional 10 acre basin at the terminus of the Peoples Ditch adjacent to the Weidman Basin.

The east branch of the Peoples Ditch system is no longer in service as an irrigation facility, and serves a portion of eastern Hanford as a drainage conveyance. The City is working to maintain and develop that facility, plus improve the out fall to accommodate additional storm water run-off.

The City of Hanford has approximately 568 acre-feet of drainage basins, which percolate storm drainage water and excess domestic water all year around. This is an effective measure for local recharge of storm water and excess water that may be otherwise lost to evaporation/transpiration. The City's drainage system disposes storm water basins which percolate water to the unconfined aquifer. Although some water is lost to evaporation, basins are concentrated which minimizes this loss. The City is currently planning for additional basins, most of which will be along the joint use irrigation facilities through the City. These basins will be designed specifically to assist future recharge purposes, as well as storm water control.

4.16.5.b Environmental Impacts

Build out of the General Plan Area will require the expansion of the existing storm water drainage system. Based on a preliminary study of the build out area an additional 2,060 acre feet of storm drainage basin capacity will be required. Given typical design standards, approximately 132 acres of land within the General Plan Area will be necessary to accommodate storm water needs. Additional acreage may be required for design modifications for multi-use facilities depending on the desirability of multi-use and accessibility. Prior drainage studies have strongly recommended the utilization of slough remnants as ingredients of drainage facilities. The General Plan Open Space and Conservation Elements supports this concept and provides implementation measures. The value and practicality of multi-use facilities should be evaluated to determine if they can be cost effectively developed and maintained. Maintenance of multi-use facilities are typically provided by Maintenance Districts formed at the time projects are constructed. State legislation has constrained the ability of the City to provide for fiscal resources to maintain these facilities, particularly for multi-use.

Prior drainage studies have strongly recommended the utilization of slough remnants as ingredients of drainage facilities. An updated Drainage Master Plan should be a priority and include a discussion of multi-use concepts if possible. Use of Slough remnants, recreation uses, and pedestrian circulation can be combined with a drainage system. New growth must be designed in accordance with a Master Drainage Plan to conserve land, allow incremental development, and ensure adequate funding. Existing drainage discharge into canals and ditches may not be acceptable for the long term, given liability issues.

Implementation of the General Plan would has the potential to adversely impact the storm drainage collection and disposal system and there would be insufficient capacity in the existing facilities to accommodate additional growth without enlargement. An increase in the number of structures and impermeable surface area would increase the amount of stormwater run off within the Planning Area. This is considered a potentially significant impact. However, implementation of the policies and programs contained in the proposed General Plan would adequately mitigate impacts to a less than significant level.

4.16.5.c Mitigation Measures

No mitigation measures are required beyond the Policies and Programs contained in the General Plan. The General Plan Open Space/Conservation, and Recreation Element, and the Public Facilities Element contains several Policies and Programs

which mitigate impacts associated with implementation of the General Plan. Specifically Program OCR 3.2-A, Objective OCR 7, Policy OCR 7.1, Policy OCR 9.2, Objective PF 2, Policy, PF 2.1, Policy PF 2.2, Policy PF 2.3, Objective PF 7, Policy PF 7.1, Policy PF 7.2, Program PF 7.2-A, Program PF 7.3, Objective PF 8, Policy PF 8.1, Policy PF 8.2, Program PF 8.2-A, and Policy PF 8.3

Level of Significance After Mitigation

Less than Significant

Mitigation Implementation and Monitoring Responsibility Implementation

Implementation: The City of Hanford Community Development Department through the Annexation, Subdivision Map, and project review processes shall be responsible for recommending findings of consistency with the General Plan. The Hanford Public Works Department participates in the review and recommendation of proposed projects. The Hanford Planning Commission and City Council are responsible for adopting such findings of consistency prior to project approval. The City Council is responsible for the City budgets and assigning development impact fees to provide for the expansion of stormwater collection and disposal facilities.

Monitoring: The various implementing departments of the City of Hanford are responsible for administering the City's Site Plan Review and Subdivision Ordinance processes. An application for a Certificate of Occupancy is required prior to completing a project. The conditions of approval are checked prior to issuing a Certificate of Occupancy. The City Council as the legislative body of the City prepares annual budgets at which time programs can be included to expand stormwater collection and disposal facilities.

4.16.6. Solid Waste

4.16.6.a Environmental Setting

Organization and Facilities for Disposal

The Kings County Waste Management Authority (KCWMA) was formed in September 1989 by agreement between the cities of Hanford, Lemoore, Corcoran and the County of Kings in order to provide a regional approach to all waste management activities in Kings County. The name has since been changed to Kings Waste Recycling Authority (KWRA).

With three of the four incorporated cities in the county and the County Government as members, the Authority represents the entire county with the exception of the City of Avenal and the Lemoore Naval Air Station. KWRA operates the material recovery facility/transfer station as an enterprise function, with all revenue coming from solid waste disposal fees and sale of recovered recyclable materials and compost. Responsibilities of the KWRA include the siting, permitting, financing, construction and operation of landfills, a Materials recovery facility/transfer station. Additional

responsibilities include all activities and waste diversion goals required by the State and the closure, post-closure monitoring and liabilities of all identified former landfills in Kings County.

The existing KWRA landfill is Southeast of the City of Hanford, is about 95 acres in size, has been in operation since 1973 reaching capacity in March of 1992. Closure of the landfill was completed in 1998.

The KWRA does not operate an active landfill. Waste is hauled by transfer trucks form the Material Recover Facility (MRF) to the State permitted Chemical Waste Management Landfill site in the Kettlemen Hills approximately 45 miles west of the MRF. A combined Materials Recovery Facility (MRF) and Transfer Station (TS) has been constructed near the old landfill southeast of the City of Hanford. The Materials Recovery and Transfer station facility includes a small but complete Household Hazardous Waste collection station. The City of Hanford has instituted a "greenwaste" collection mixed recyclable collection program for single family residential customers. The MRF is reporting that a 48% recycling rate above the base year has been accomplished on a countywide basis.

The City of Hanford and Kings County have cooperatively developed the Integrated Waste Management Plan (1995). This Plan contains the mandatory elements of a Source Reduction and Recycling Element (SRRE) and a Household Hazardous Waste Element (HHWE). In addition, this document contains A Siting Element and the Non-Disposal Facility Element for the City of Hanford. This Plan has been accepted by the California Integrated Waste Management Board.

4.16.6.b Environmental Impacts

Build out of the General Plan (2025) will increase the waste stream in Kings County by and estimated 29,300 tons per year. There will eventually be a need for additional landfill space and the expansion of recycling programs to meet state law for reducing the amount of tonnage going into landfills. The City of Hanford was required to reduce wastes deposited in the landfill by 50 percent by the year 2000. With the continued cooperation of the cities and county in KWRA, there will be no significant impacts from the implementation of the proposed General Plan. The City of Hanford operates solid waste collection as an enterprise function. Capital replacement of equipment and the expansion of the fleet to meet increased demands should be within the operational parameters of that function.

Implementation of the General Plan would has the potential to adversely impact the solid waste collection and disposal system. An increase in the number of residential, commercial, public, and industrial uses will increase the amount of solid waste produced within the City. This is considered a potentially significant impact. However, implementation of the policies and programs contained in the proposed General Plan would adequately mitigate impacts to a less than significant level.

4.16.6.c Mitigation Measures

No mitigation measures are required beyond the Policies and Programs contained in the General Plan. The Public Facilities Element contains several Policies and Programs that mitigate impacts associated with implementation of the General Plan. Specifically Objective PF 2, Policy PF 2.1, Policy PF 2.2, Policy PF 2.3, Objective PF 11, Policy PF 11.1, Programs PF 11.1-A, and Policy PF 11.2.

Level of Significance After Mitigation

Less than Significant

Mitigation Implementation and Monitoring Responsibility

Implementation: The City of Hanford Community Development Department through the Annexation, Subdivision Map, and project review processes shall be responsible for recommending findings of consistency with the General Plan. The Hanford Planning Commission and City Council are responsible for adopting such findings of consistency prior to project approval.

Monitoring: The various implementing departments of the City of Hanford are responsible for administering the City's Site Plan Review and Subdivision Ordinance processes. An application for a Certificate of Occupancy is required prior to completing a project. The conditions of approval are checked prior to issuing a Certificate of Occupancy.

4.16.7. Electricity

4.16.7.a Environmental Setting

Southern California Edison Company (SCE) provides electricity to the preponderance of the Planning Area via underground and overhead lines. SCE's main substations providing service to the project regions are located in central area of the City, north of State Route 198. SCE is a public utility and therefore, functions on demand. Pacific Gas & Electric Company provides electricity south of Iona Avenue in the southern part of the Planning Area. Extensions of facilities are based on extension rules filed with the Public Utilities Commission of California.

4.16.7.b Environmental Impacts

Intensification of land uses due to the General Plan would result in increased demand for electricity in the Planning Area. As a public utility, SCE is required to provide electrical service to accommodate demand resulting from new development. Development due to the General Plan may require the expansion of SCE facilities within and outside the proposed development boundaries.

4.16.7.c Mitigation Measures

Necessary expansion of on-site and off-site gas distribution lines and substations should be identified during development planning stages. The City of Hanford shall work

with SCE to ensure development of new facilities is performed prior to construction and permitting of each project.

Future environmental reviews required for large scale projects which also would require the installation of major SCE facilities should be conducted as part of the Hanford EIR process. Responsibility for these studies would belong to the developer and should be considered a apart of the overall project. On-site utility easement necessary to serve proposed would be required as a condition of approval.

Impacts on electrical services are adverse, however, through implementation of mitigation measures described above, impacts remain at a less than significant level.

Level of Significance After Mitigation

Less than Significant

Mitigation Implementation and Monitoring Responsibility

Implementation: The City of Hanford Community Development Department through the Annexation, Subdivision Map, and project review processes shall be responsible for recommending findings of consistency with the General Plan. The Hanford Planning Commission and City Council are responsible for adopting such findings of consistency prior to project approval.

Monitoring: The various implementing departments of the City of Hanford are responsible for administering the City's Site Plan Review and Subdivision Ordinance processes. An application for a Certificate of Occupancy is required prior to completing a project. The conditions of approval are checked prior to issuing a Certificate of Occupancy.

4.16.8. Natural Gas

4.16.8.a Environmental Setting

Southern California Edison services the Planning Area. Plastic and steel underground lines are located throughout the Planning Area. Residents not serviced by SCE in the Planning Area utilize bottled propane or butane fuel.

4.16.8.b Environmental Impacts

Intensification of land uses in the Planning Area due to the General Plan would result in increased demand resulting from new development. Development due to the General Plan may require the expansion of SCE facilities within and outside the proposed development boundaries resulting in an adverse impact.

4.16.8.c Mitigation Measures

Necessary expansion of on-site and off-site gas distribution lines and substations should be identified during development planning stages. The City of Hanford shall work

with SCE to ensure development of new facilities is performed prior to construction and permitting of each project.

Level of Significance After Mitigation

Less than Significant

Mitigation Implementation and Monitoring Responsibility

Implementation: The City of Hanford Community Development Department through the Annexation, Subdivision Map, and project review processes shall be responsible for recommending findings of consistency with the General Plan. The Hanford Planning Commission and City Council are responsible for adopting such findings of consistency prior to project approval.

Monitoring: The various implementing departments of the City of Hanford are responsible for administering the City's Site Plan Review and Subdivision Ordinance processes. An application for a Certificate of Occupancy is required prior to completing a project. The conditions of approval are checked prior to issuing a Certificate of Occupancy.

4.17. CUMULATIVE IMPACTS

Environmental Setting

CEQA Guidelines define cumulative effects as 'two or more individual effects that, when considered together, are considerable or which compound or increase other environmental impacts." The Guidelines further state that the individual effects can be the various changes related to a single project or the change involved in a number of other closely related past, present, and reasonable foreseeable future projects (Section 15355).

According to CEQA Guidelines Section 15130 (1).1.A and B, a list of past, present, or anticipated future projects, or a summary of projections contained in an adopted General Plan or related planning document which evaluates regional or areawide conditions can serve as the basis for cumulative analysis. The growth projections for the City of Hanford and Kings County form the basis of this analysis.

The Kings County General Plan continues to estimate growth of the overall County at a rate between 2.0% and 4%. Hanford's growth rate has been estimated at 2.8% per year over the planning period. Hanford's planning horizon extends to 2025 and beyond. The shortcoming of these estimates is that the future can not be forecast with any certainty, and any number of social or economic conditions could effect this estimate. Certainly in the past the expansion of Lemoore Naval Air Station had an effect on producing additional population and housing demand in Kings County and in Hanford. The outlook for moderate economic growth in the Central Valley and diversification of local economies will have a continuing impact as well. The City of Hanford, and Kings County continues to pursue a diverse jobs and economic base. This effort is targeted on attracting new and clean industry into the community. There may be a short-term peaks in the growth rate, but over time a 2.8% growth rate is consistent with the experience since 1990 and anticipated in the future.

4.17.1. Aesthetics

Cumulative impacts on aesthetics of the regional basis relate to the conversion of agricultural land into an urban setting. This impact represents a change in character for the Planning Area, which is partially mitigated by the landscaping requirements of the General Plan. The pressure for conversion of older historic neighborhoods will continue, however the General Plan provides guidance in maintaining the fundamental character of the Downtown and the older houses that may transition to office uses. The change in aesthetics will be permanent in the Planning Area, however maintaining agricultural uses around the City should minimize the adverse cumulative impacts. This is a less than significant impact.

4.17.2. Agricultural Resources

The City of Hanford is essentially surrounded by Prime and Statewide Importance farmland. Implementation of the General Plan will encroach on these farmlands and any conversion of prime farmland is considered cumulatively significant and an impact that cannot be mitigated. The General Plan Planning Area boundary remains the same as

adopted in 1994 with the exception of an additional 125 acres at Highway 43 and Lacey Blvd. By the year 2025 implementation of the General Plan is forecasted to convert approximately 5,918 acres of agricultural land to urban use (this includes 1,445 acres for "residential market factor" that will be undeveloped but available for development). Full build-out of the General Plan at some future date may convert a total of 6,551 acres of agricultural land to urban uses. This is an unavoidable significant impact.

4.17.3. Air Quality

Implementation of the General Plan in combination with all other development activity and continued agricultural operations in the region would contribute to significantly increased air pollution and impacts on air quality. The General Plan would increase the ratio of commercial and industrial development to housing which has the potential to reduce the need for and length of automobile trips. Mitigation of regional air quality impacts can only be addressed in a comprehensive manner by the San Joaquin Valley Air Pollution Control District. The General Plan's Objectives, Policies, and programs demonstrate a commitment to participate in region-wide solutions in concert with neighboring cities and counties. The General Plan also contains Objectives, Policies, and Programs that assist in minimizing cumulative air quality impacts. This is an unavoidable significant impact.

4.17.4. Biological Resources

Cumulative impacts include the loss of marginal wildlife habitats and foraging areas in agricultural areas in the Planning Area and adjacent to the Planning Area. The Planning Area does not contain any identified critical habitats of endangered or threatened species. To the extent feasible, implementation of the General Plan would preserve slough remnants as part of an open space/recreation program and avoid the premature conversion of agricultural land. Although the preservation of these areas would reduce and delay the loss of marginal habitat, cumulative loss of marginal habitat due to urban and agricultural development in Kings County and the region may be substantial over time. For the purposes of the Hanford General Plan EIR and the impacts to the marginal habitat within the Planning Area, the cumulative impact is considered less than significant for Hanford.

4.17.5. Cultural Resources

Potential impacts related to cultural resources are site specific and cannot be accurately assessed on a cumulative basis. Given the past agricultural practices, surface indications of potential sensitive sites have been obliterated. The General Plan contains direction on handling potential sensitive sites that should avoid any significant impacts. The City has established a Historic Resources District in the Zoning Ordinance to provide protection for existing historical buildings in the Downtown Business District, which should avoid any significant cumulative impacts on historic resources.

4.17.6. Geology and Seismic Hazards

Impacts relating to geology and soils are site specific and generally cannot be considered in cumulative terms. The possible exception would be earthquake hazards that tend to be regional. Implementation of building code standards should minimize

effects associated with geologic and seismic hazards. This is a less than significant impact.

4.17.7. Hazards and Hazardous Materials

Build-out of the General Plan will increase the number of people who would be effected by potential hazards. Continued maintenance of Emergency Preparedness Programs and emergency response plans would provide adequate protection from hazards and no significant impacts are expected. Review, as part of the development processing, of suspected sites where hazardous materials may have been deposited will aid in the minimization of potential threats to human health. This is a less than significant impact.

4.17.8. Hydrology and Water Quality

Withdrawal of ground water for domestic purposes will add to the potential for overdraft of the ground water aquifer. As such it will increase the need for recharge facilities which both urban and agricultural interests participate. If imported surface water is used for groundwater recharge, the reliance on this source could increase the comparative demand of urban water versus agricultural water. Cooperation between the City and water agencies will be essential to develop and implement water recharge programs. Implementation of General Plan Policies and Programs will result in a less than significant impact.

Cumulative impacts to local stormwater disposal are dependent on specific project development proposals. Within the Planning Area the increase in impervious surfaces will increase the amount of storm water run off which will need to be collected and disposed. The development of areawide disposal facilities will potentially increase the amount of groundwater recharge in the immediate Planning Area. Implementation of General Plan Policies and Programs will result in a less than significant impact.

4.17.9. Land Use

Growth in Kings County and the City of Hanford will increase the number of dwelling units, jobs, and the demand for public facilities. As growth occurs at urban standards, the land consumed by development is lost to potential agricultural production. Despite the General Plan Objectives, Policies, and Programs to avoid premature development of agricultural land and to enforce the Planning Area boundaries with reduced infrastructure capacity, the eventual urbanization of agricultural land would be cumulatively significant and unavoidable. The City has engaged in acquisition of agricultural land outside of the Planning Area to preserve the amount of agricultural land in the County.

4.17.10. Mineral Resources

There are mineral resources located in the Planning Area.

4.17.11. Noise

Build out of the General Plan will cumulatively add to the noise environment in Kings County resulting from the additional vehicle trips to and from the City of Hanford. As